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ABSTRACT

This module for a Total Quality Management (TQM) course was designed to give students a broad background in TQM and its influence on the business world in the United States. It can be used in a U.S. history class, an economics class, an English class, or as part of a TQM course for high school or community college students. The module covers the following topics: (1) U.S. competitiveness; (2) TQM concepts; (3) quality "gurus"; and (4) paradigms and the need for change. These topics are presented in order to give students an organized approach to keeping pace and making progress in a continuously changing world. The module includes a bibliography listing 18 references. (KC)

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TOTAL QUALITY MANAGEMENT (TQM):

TRAINING MODULE

ON

" OVERVIEW OF TQM "

ED 365 879

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EF 065 639

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OVERVIEW OF TQM

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OVERVIEW OF TQM

INTRODUCTION:

This module is meant to give the student a broad background in Total Quality Management (TQM) and its influence on the business world in the United States. It can be presented in a U.S. history class, an economics class or used as a study topic in an English class at the high school level. It can also be used at the college level in similar type courses. It is important that the students become familiar with the terminology.

The topics in this module are U.S. Competitiveness, Paradigms/The Need for Change, TQM Concepts, and Quality Gurus. The intent of these topics is to give the students an organized approach on how to keep pace and make progress in a continuously changing world. The business world's rapidly changing needs require that a more progressive, sophisticated workforce be put in place in order for the United States to compete in the world market. The other TQM training modules provide tools the students can use not only in the workforce but also in the classroom.

The first topic, U.S. Competitiveness, is a summary of factual information about the United States' economy over the last 100 years to the present, leading into the topic Paradigms/The Need for Change. The portion on Paradigms/The Need for Change can be introduced by using the charts provided. There are also quotations included that will help drive this idea home. Joel Barker has done a lot of work in the area of paradigms, which is a "way of 'thinking' or 'peoples values." The necessity for business and education to change our way of thinking revolutionizes our commitment as a key global player. The tools that will enable us to evolve these changes are taught through Total Quality Management.

Total Quality Management (TQM) is a management system for managing change. The TQM concept is built on four cornerstones: 1) commitment to customer satisfaction, 2) commitment to continuous improvement 3) empowered employees, and 4) teamwork. Although there are different philosophies on implementation of Total Quality Management, the accepted movement is based on the above cornerstones. The Total Quality Management movement is based on the accumulation of ideas of quality "gurus" during the last century. A Quality's Family Tree flow chart is provided to show how the present time has come to be known as the renaissance of American quality.

In summary, this module is designed to help the student understand the importance of the quality movement in the United States as well as worldwide. In order for the U.S. to remain competitive in business and education while playing a larger part in the world economy of the future, we will have to implement these concepts.

TQM OVERVIEW

NARRATIVE:

The best place to start a study of Total Quality Management is in the area of United States competitiveness. The lack of United States competitiveness over the last 10 to 15 years has led many businesses in this country to adopt Total Quality Management principles. The basic facts presented in this module show that the United States has lost its competitive edge in world markets.

The United States has degressed from a country which, after World War II, was by far the world's leading economic leader and was really the only country that had a sound manufacturing base. The United States had a huge domestic market, the world's best technology, the best educated workforce and enormous wealth. In the short forty years since World War II, the United States has lost the competitive edge in many industries. The technology base the United States is famous for has eroded to the point, although we still develop many products here, most products are manufactured overseas. This is primarily due to the fact that labor costs in other countries are much lower than they are in the United States. The cost of labor in other countries varies from $15 to $20 a month in the Ukraine and Russia to approximately 1/10 of the United States wage in Korea. Since the world has become very open, after the end of the "cold war", global competition for manufacturing capability has become a reality. United States industry has found that if it is unable to compete in price due to labor costs, it will have to compete in the area of quality. Ever since the early 80's, such companies as Xerox and Motorola have made great strides in improving the quality of their products. Their efforts, which may be known by different names, all fall under the philosophy of Total Quality Management. It has been said, "Total Quality Management is embraced by industry when the only choice is bankruptcy or Total Quality Management."

One of the other major concerns of United States industry is an educated workforce. At the current time, and into the next century, only 20% of people entering the workforce will need a 4-year college degree. The number of unskilled workers is continuing to decrease because of the manufacturing of products in other countries. Currently, the unskilled workforce is approximately 35% of the total workforce and will be decreasing to 15% by the year 2000. This leaves 65% of the workforce which must have skills beyond what is currently offered at the high school level. This fact has led many in industry to look to the education system and see that the current product of the education system does not meet the requirements for literacy and basic technical skills. It has become evident, in the last several years, in the state of Texas as well as in the United States that an educated workforce is the key to our state and country's future.

In comparing the United State's education system to other countries, it is evident the products of our education system do not match up in basic skills to those in other countries. This has become a concern for not only educators but also business and government alike. There is a tremendous opportunity, at this time, to make changes to improve the outcome of education. There are many initiatives currently underway in the United States and many more initiatives will be coming forth in the next several years. Skill development is the key to the future of our country, not just education. The fact that a person has an education, if jobs are not needed in that area or field, is not very helpful. The key is to develop skills both socially and technically that will lead each of the workers to be more productive in the future. Education is faced with the same realities that business has been faced with over the past decade. These include the need for major changes in the way that education is delivered just like industry had to change the way it did business. This leads to the potential for Total Quality Management to be accepted in the field of education to make these improvements.

Total Quality Management had its foundations in work that was done in Japan shortly after World War II. This work was actually led by the American "occupation forces." Two noted statisticians and quality experts were W. Edwards Deming and Joseph Juran who went to Japan and trained the Japanese in the need for quality. Dr. Deming taught that Japan would not be able to compete for quantity with the United States because of the large industrial base of the United States. Therefore, the need of the Japanese was to develop high quality products. The Japanese took these statistical tools, taught by Dr. Deming, and enhanced them to enable Japan to become the highest quality producer in the world today. The improved standards of quality that have occurred over the last several decades continually increase the need for higher quality products. Quality tends to drive productivity which then drives the standard of living of a country.

Although an exact definition of Total Quality Management is hard to find, several are given on pages 79 and 80. Total Quality Management is a management system designed to manage change. Traditional management systems tend to be efficient in managing status quo. Total Quality Management is truly designed to handle change. This makes TQM very appropriate for the current period that our country is going through. One definition is that TQM is a customer driven approach to operating an organization by combining the talents of labor and management, working cooperatively, to improve the quality and productivity through teamwork and fact based methodologies.

Total Quality Management is a philosophy for conducting business. It is a fundamental new way of doing business through high level employee empowerment. One key point about TQM is that it is not a short term commitment. It must be a long term commitment. In fact, many experts say it will take from five to ten years to embed TQM within the underlying foundations of an organization. TQM is not a one-time effort and it is certainly not a cure-all.

There are four cornerstones of Total Quality Management. The many experts in the field have different lists and points that they make in defining TQM. Through my study, I have found that they all have four basic areas in common which are:

- 1. Commitment to Customer Satisfaction.
- 2. Commitment to Continuous Improvement.
- 3. Empowered Employees
- 4. Teamwork

Total Quality Management can be implemented through many initiatives, such as: employee empowerment, continuous improvement, benchmarking and focusing on the customer. There are also many tools used in Total Quality Management. Some of these tools are: brainstorming, benchmarking, statistical process controls and quality functional deployment.

Total Quality Management can be implemented within an organization by the leadership of that organization. The first thing that must happen is that leadership must accept the need for change. Once leadership has determined there is a need to change the organization, they must have an understanding of a way to go about changing. An organization's "vision" is very key to having an organization implement change and also be willing to follow through with TQM philosophies. Additional "management" training in TQM is necessary before the rest of the organization is trained. Once management has been trained, they can then develop a strategy for implementing TQM throughout the organization. Usually this strategy will include training of the rest of the organization and developing "pilot projects." After these pilot projects are implemented and the results are monitored, modifications can be made to the implementation strategy. Once the pilot projects have proven successful, they can be expanded to widen the circle of influence through an organized approach and the total organization can be trained and TQM implemented.

In order for Total Quality Management to be successful, the organization must be committed to: basic change, a focus on the customer, employee involvement, and long term management support.

The current noted quality "gurus" are W. Edwards Deming, Joseph Juran, Armand Feigenbaum and Phil Crosby. The section on quality "gurus" not only includes those noted experts in the field of TQM, but also will cover several other American and Japanese experts along with a short biographical outline of each of these experts. Some of their basic philosophies and teachings are included.

As we noted earlier, the need to change is necessary in order for an organization to successfully implement Total Quality Management. It has been shown, through the organizational life cycle on page 142, that when an organization starts it has rapid growth and improvement in business activity. Once it reaches a maturity level (i.e., stagnation), it has only two places to go. It can either go into decline because the organization will not change as necessary or it can go into renewal and experience an increase in business activity. This renewal is what Total Quality Management is all about.

The beginning point of the implementation of Total Quality Management is determining the need to change. A lot of work has been done, especially by Joel Barker, in the field of paradigms. Paradigms are actually ways of thinking or attitudes people have. It is very difficult for people to become willing to change their attitudes. One of the paradigms of education is that students must sit in desks, in rows, with 22 to a class for 55 minutes. This "old way" or "traditional" way of thinking is not necessarily the most effective way to educate students. Much work is underway in non-traditional methods where class periods are longer than 55 minutes and the students work in teams.

In summary, it is important for the person who becomes involved in Total Quality Management to have some sense of the history of TQM. This can be gained through a study of the noted quality experts as well as the history of quality in this country. It is also important to understand United States competitiveness not only in business but also in education. Since TQM has evolved due to a need for change, the fact that the United States has lost its edge in many areas has established this need for change in many aspects of our country. Not only must business and education change, the mood currently is that other segments of our society, such as government and medical care, must also undergo change. The field of TQM provides many initiatives and tools that can help foster this change and make the change successful.

" UNITED STATES COMPETITIVENESS "

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U.S. COMPETITIVENESS

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U.S. COMPETITIVENESS

FACTS

-- The Texas Employment Commission can only place 17% of job applicants because of the lack of basic skills.

-- In a survey of companies by The National Association of Manufacturers, it was found that 67% of the companies could not find employees with the required skills.

-- Between 20% and 40% of a manufacturing plant's budget is spent to build, find and fix mistakes.

-- More than 50% of all doctorates awarded in American graduate schools in 1990 were not to Americans.

-- In 1960, 13% of American college graduates were engineers. By 1988, it was 4%.

-- The United States has 5% of the world's population and 70% of the world's lawyers.

-- In the mid 1960's the U.S. had 50% of the world's market share in basic industries, now we are about 22%-23%

-- In 1973, the U.S. had 15% of the world market share in business services such as insurance, finance, travel, architectural and engineering services. We have less than 7% today.

-- In the late 1970's and early 1980's, the U.S. had a high technology trade export surplus of over $28 billion a year. Since the mid-1980's the U.S. is running a deficit.

FACTS

-- The Texas Employment Commission can only place 17% of job applicants because of the lack of basic skills.

-- In a survey of companies by The National Association of Manufacturers, it was found that 67% of the companies could not find employees with the required skills.

- The greatest indicator of a child's academic success is the literacy rate of their mother.

-- 63% of American women are now working, 91% will be working by 2000

Opinion Expressed By:	Students Prepared for the Job Market	Ability to Get Along with Others	Ability to Solve Complex Problems
Student	70%	72%	70%
Parents	65%	77%	65%
Employers	30%	50%	10%

-- There are more school administrators in New York City than in France and more in New York State than in all of Europe.

-- Between 20% and 40% of a manufacturing plant's budget is spent to build, find and fix mistakes.

-- 85% of the problem is with the system (it is management controlled), 15% is with the worker.

-- Motorola found that every $1 invested in quality education returned $33.

-- More than 50% of all doctorates awarded in American graduate schools in 1990 were not to Americans.

-- In 1960, 13% of American college graduates were engineers. By 1988, it was 4%.

-- The United States has 5% of the world's population and 70% of the world's lawyers.

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PRODUCT	PERCENT SOLD IN U.S. AND MANUFACTURED BY U.S. COMPANIES IN THE U.S.	
	1970	1988
TELEPHONE SETS	99%	25%
SEMICONDUCTORS	89%	64%
MACHINE TOOLS	100%	35%
COLOR T.V. SETS	98%	10%
AUDIO RECORDERS	40%	1%

-- A third of the university degree engineers in Germany came out of their vocational education system. Less than 2 percent of the engineers in the U.S. came up through our vocational education system.

" IF YOU ALWAYS DO WHAT YOU ALWAYS DID, YOU'LL ALWAYS GET WHAT YOU ALWAYS GOT. "

-- Anonymous

U.S. ADVANTAGES AFTER WORLD WAR II

-- A HUGE DOMESTIC MARKET

-- THE WORLD'S BEST TECHNOLOGY

-- THE BEST EDUCATED WORK FORCE

-- ENORMOUS WEALTH

-- THE WORLD'S BEST MANAGERS

-- MIT Commission on Productivity's report, **Made in America**

HUGE DOMESTIC MARKETS ?

FACTS

- IN 1970, 17 FIRMS PRODUCED TELEVISIONS IN THE U.S. - TODAY THERE ARE ONLY 2.

- IN 1975, 5 OF THE 6 LARGEST SEMICONDUCTOR MANUFACTURERS IN THE WORLD WERE U.S. COMPANIES. TODAY 6 OF THE 7 LARGEST ARE JAPANESE.

- TODAY, 2 OF THE FOUR LARGEST AUTOMOBILE MANUFACTURERS ARE JAPANESE.

- IN 1977, 6 OF THE 7 LARGEST BANKS IN THE WORLD WERE IN THE U.S. -- TODAY ALL 7 ARE IN JAPAN.

- THE LARGEST STOCKMARKET IN THE WORLD IS NO LONGER IN NEW YORK, IT'S IN TOKYO.

-- Norman R. Augustine, CEO, Martin-Marietta

U.S. AUTOMOBILE

MARKET SHARE

AUTOMAKER	1980	1992
GENERAL MOTORS	45.9%	35.4%
FORD	17.2	21.2
CHRYSLER	8.8	7.9
ALL JAPANESE	19.8	31.7
OTHERS	8.3	3.8

-- " U.S. News and World Report," November 9, 1992

HIGH TECHNOLOGY MARKET --

EROSION OF U.S. SHARE

PRODUCTS	ORIGIN OF TECHN.	PERCENT SOLD IN U.S. AND MANUFACTURED BY U.S. COMPANIES IN THE U.S.	
		1970	1988
TELEPHONE SETS	U.S.	99%	25%
SEMI-CONDUCTORS	U.S.	89%	64%
MACHINE CENTERS	U.S.	100%	35%
COLOR T.V. SETS	U.S.	90%	10%
B&W T.V. SETS	U.S.	65%	2%
VCR'S	U.S.	10%	1%
AUDIO TAPE RECORDERS	U.S.	40%	1%

-- Made in America, MIT Press, 1989

ECONOMIC CHALLENGE

OF THE 90's

PRODUCTS	U.S. SHARE OF WORLD MARKET	
	1980	1990
AUTOMOBILES	29.0%	18.2%
MACHINE TOOLS	14.0%	6.9%
FLOPPY DISK DRIVES	66.0%	4.0%
DYNAMIC RAM CHIPS	72.8%	16.9%
CUSTOM CHIPS	90.0%	53.0%

-- Made In America, Dertouzos, et al

BEST EDUCATED WORKFORCE ?

FACTS

-- The Texas Employment Commission can only place 17% of job applicants because of the lack of basic skills.

-- In a survey of companies by The National Association of Manufacturers, it was found that 67% of the companies could not find employees with the required skills.

-- 90% of the people who apply for employment at Motorola fail their entrance test. (The test is set at the 7th grade level for reading and math.)

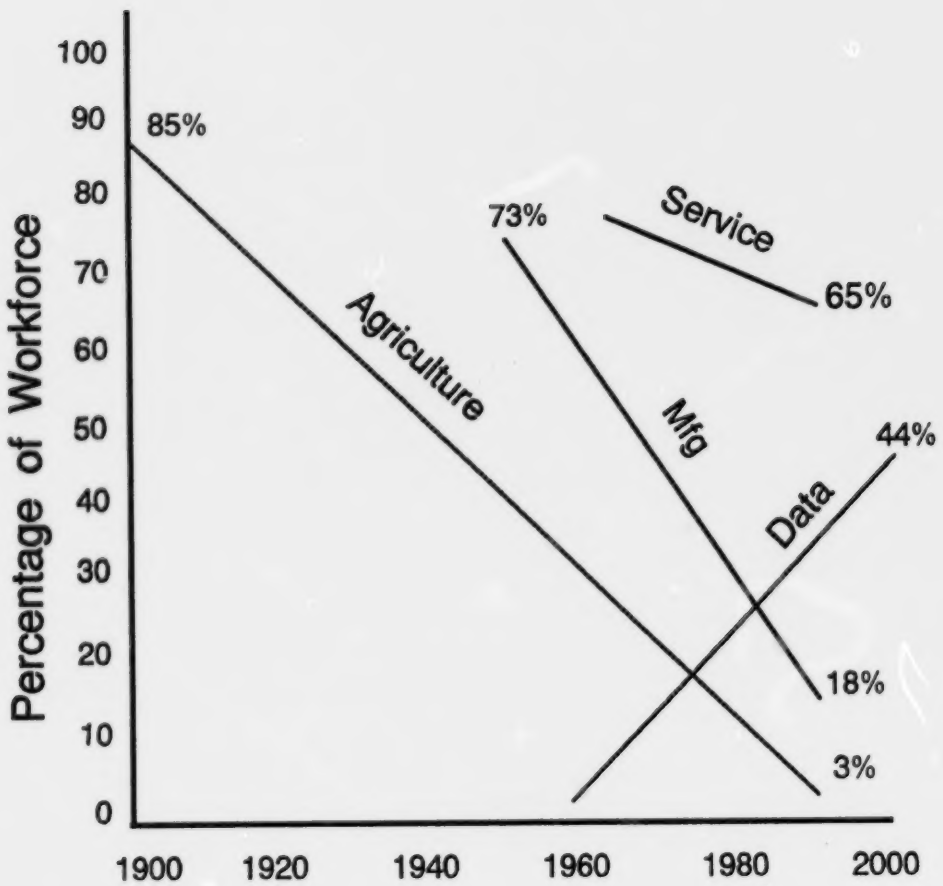
-- When Mitsubishi came to North Carolina, they wanted all their workers to have a knowledge of basic statistical techniques. They had to hire American **graduate** students to achieve that. In Japan any **high school** graduate would have had that knowledge.

-- In 1960, 13% of American college graduates were engineers. By 1988, it was 4%.

-- More than 50% of all doctorates awarded in American graduate schools in 1990 were not to Americans.

Composition of U.S. Workforce

U. S. WORKFORCE TRENDS



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ENORMOUS WEALTH ?

FACTS

-- In the mid 1960's the U.S. had 50% of the world's market share in basic industries, now we are about 22%-23%

-- In 1973, the U.S. had 15% of the world market share in business services such as insurance, finance, travel, architectural and engineering services. We have less than 7% today.

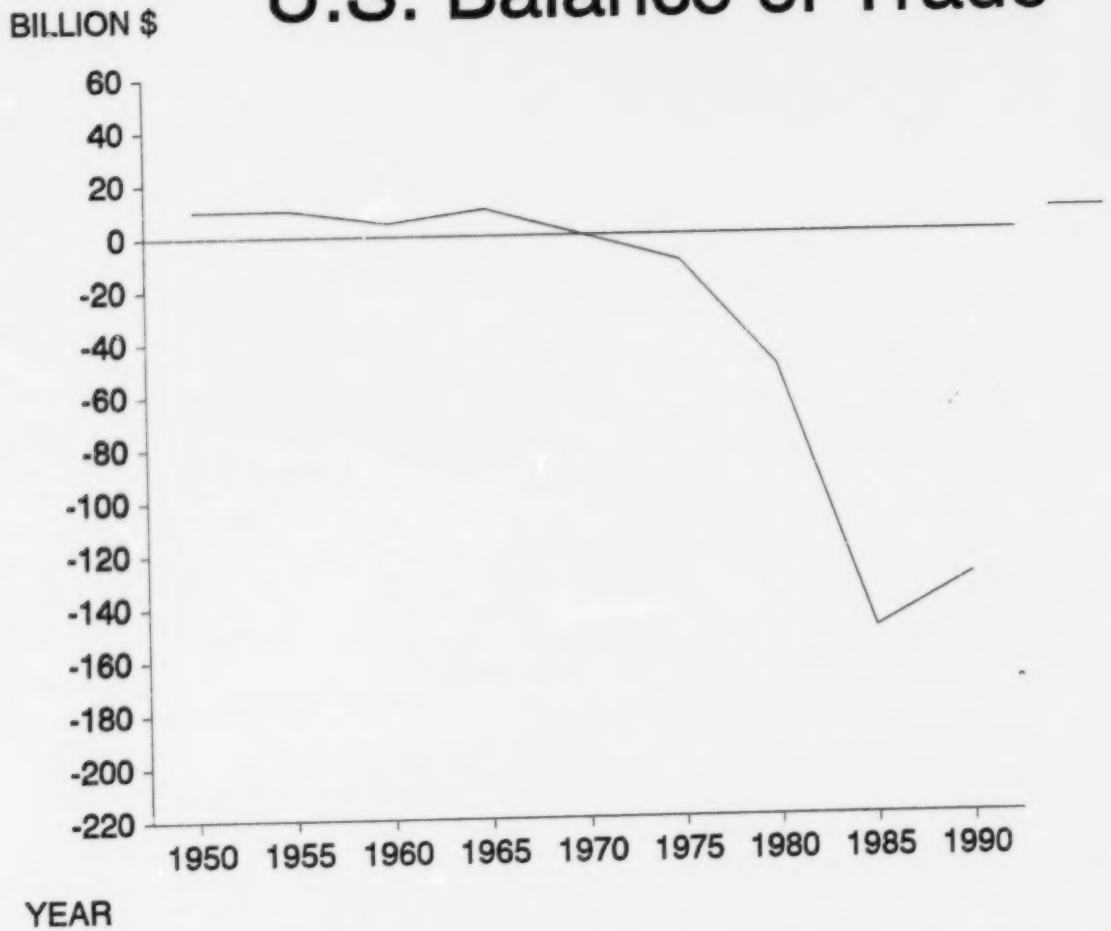
-- In the late 1970's and early 1980's, the U.S. had a high technology trade export surplus of over $28 billion a year. Since the mid-1980's the U.S. is running a deficit.

-- The United States is the largest debtor nation in the world.

-- The United States has the largest negative balance of trade of any nation in the world.

-- The United States has a current budget deficit of almost $270 Billion per year.

U.S. Balance of Trade



" THERE ARE THREE SOURCES OF

COMPETITIVENESS:

-- PRICE

-- INNOVATION

-- QUALITY "

-- David McCamus, Xerox Canada, Quality Forum VIII

U.S. CHOICE:
HIGH SKILLS OR LOW PAY

- SOUTH KOREA 1/10 U.S. PAY
- MEXICO $175 / MONTH
- INDONESIA $33 / MONTH
- RUSSIA $20 / MONTH
- UKRAINE $10- $15 / MONTH

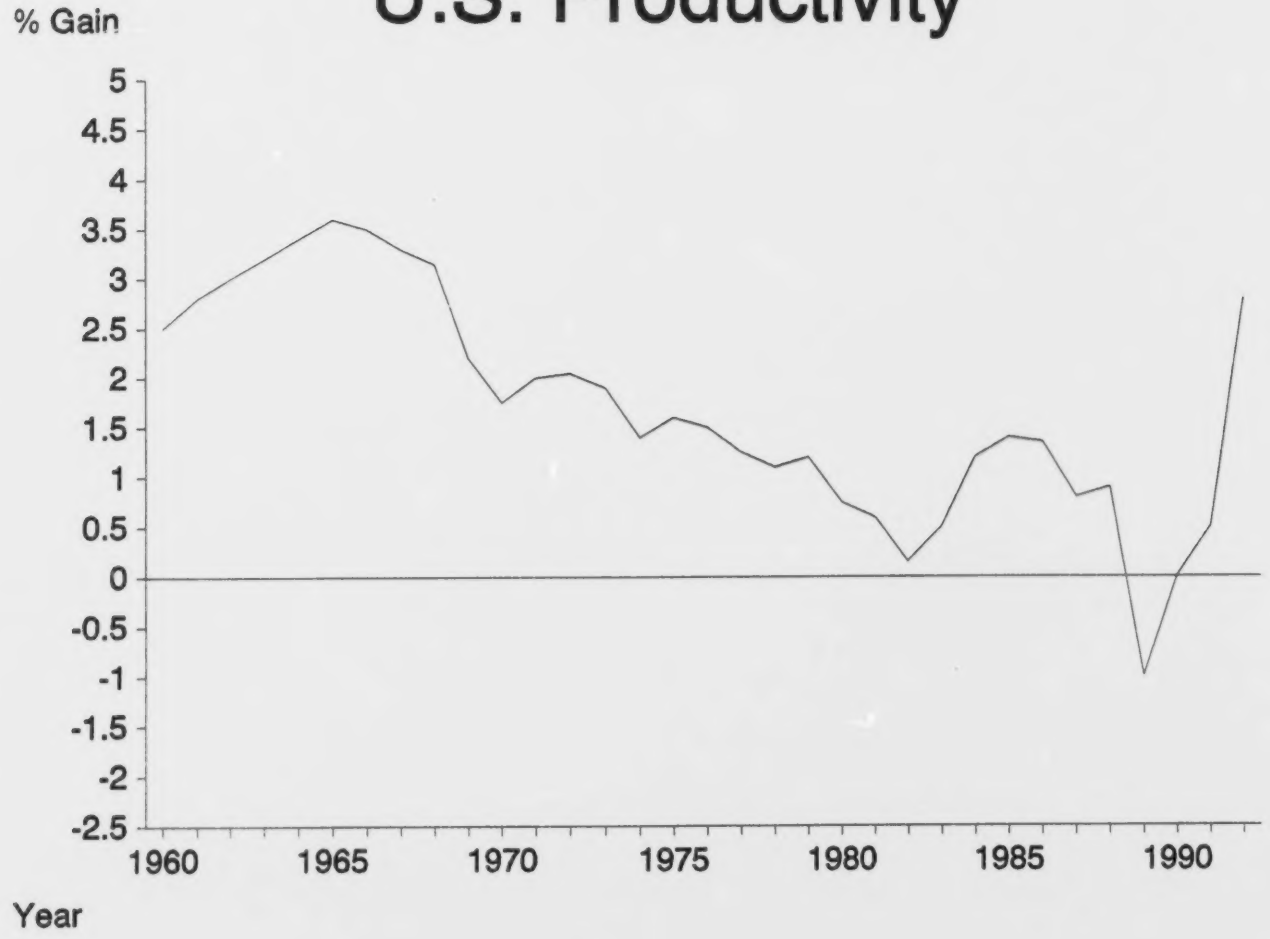
U.S. IS COMPETING FOR LOW SKILL JOBS WITH THESE COUNTRIES

AUTOMAKER PRODUCTIVITY

AUTOMAKER	LABOR COST PER VEHICLE IN U.S.
	1992
GENERAL MOTORS	$ 2,388
CHRYSLER	$ 1,872
FORD	$ 1,629
HONDA (U.S.)	$ 920

-- "U.S. News and World Report," November 9, 1992

U.S. Productivity



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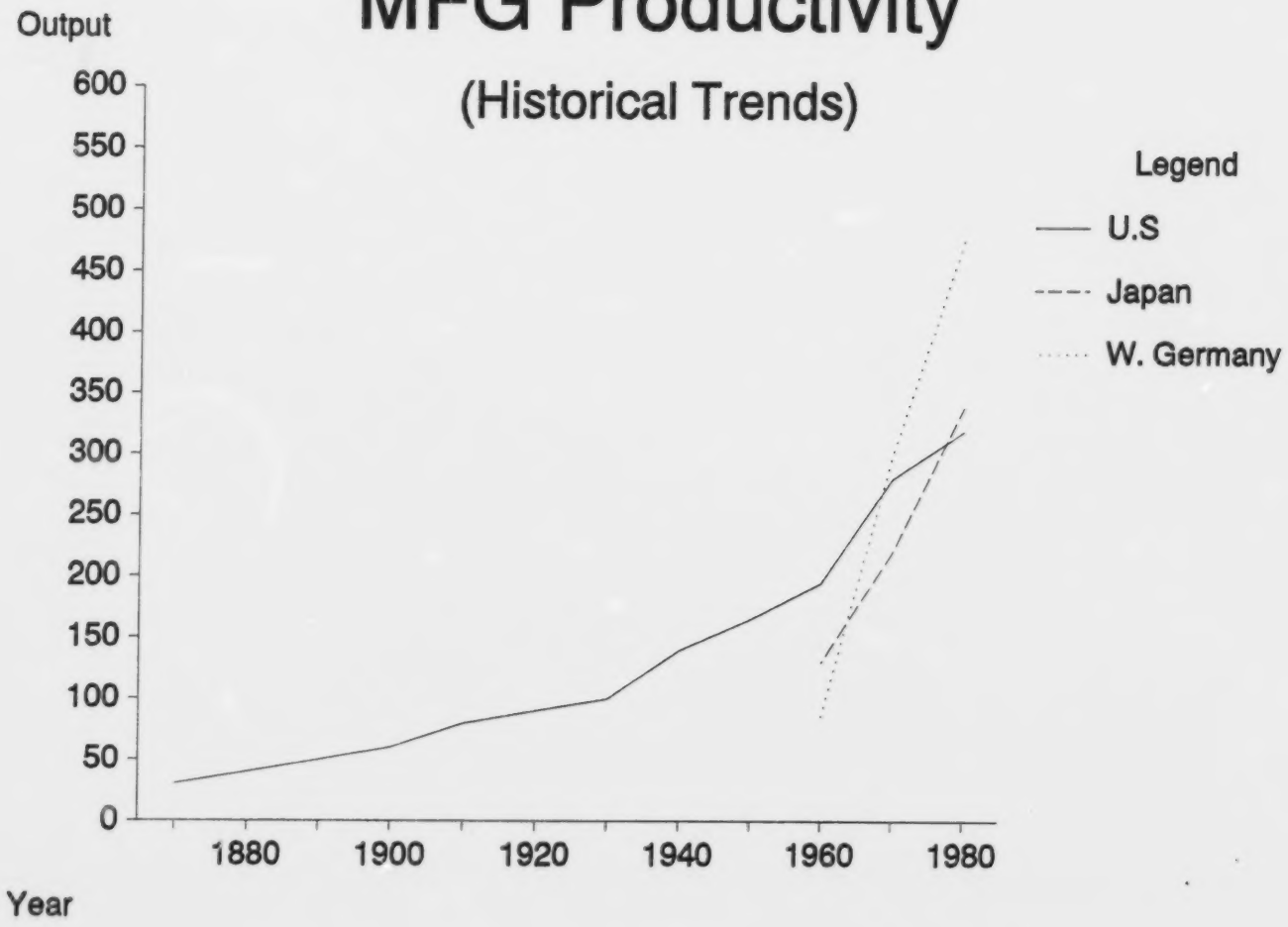
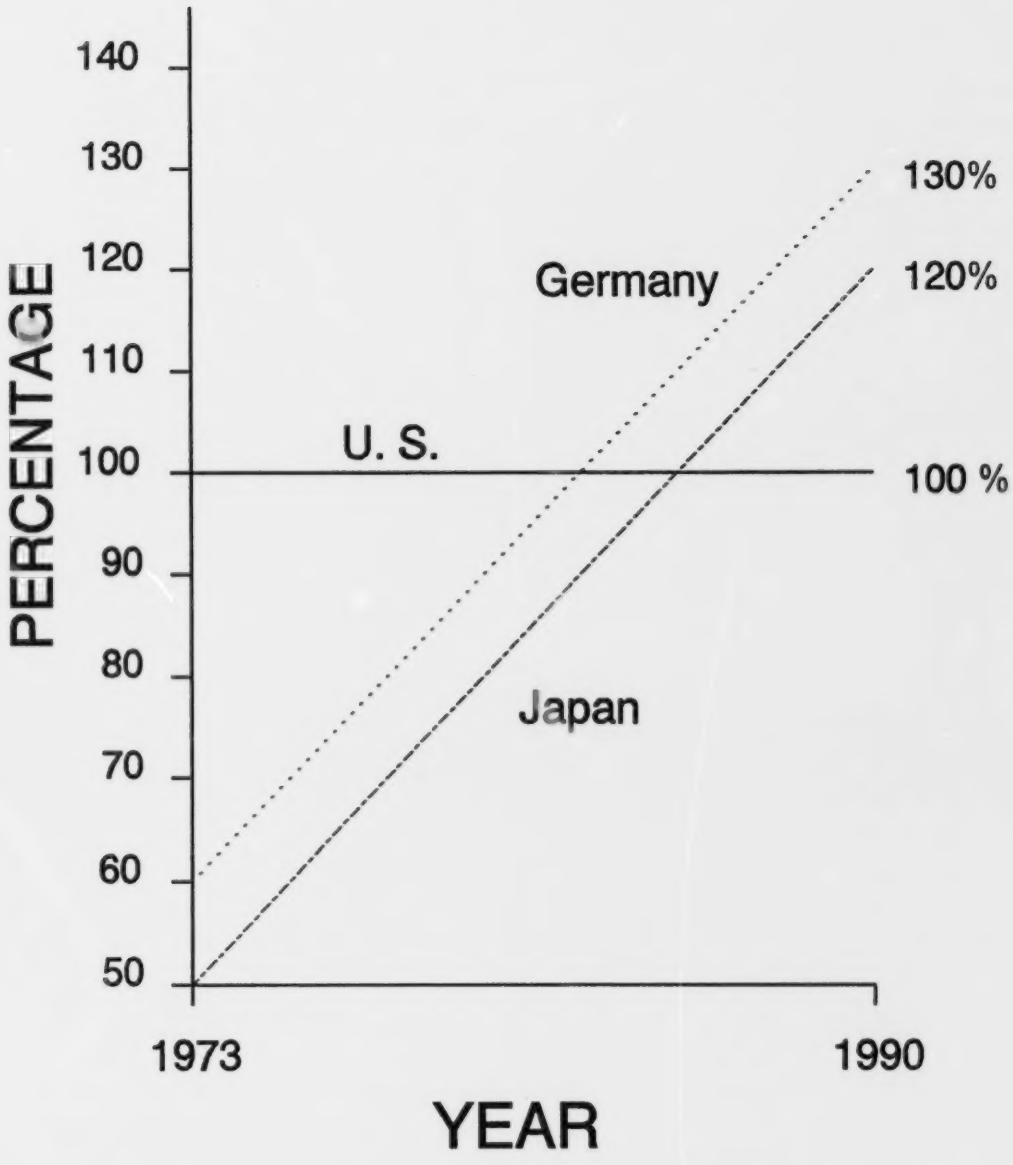
MFG Productivity

(Historical Trends)



AVERAGE INCOME



-- Magaziner & Patinkin, The Silent War

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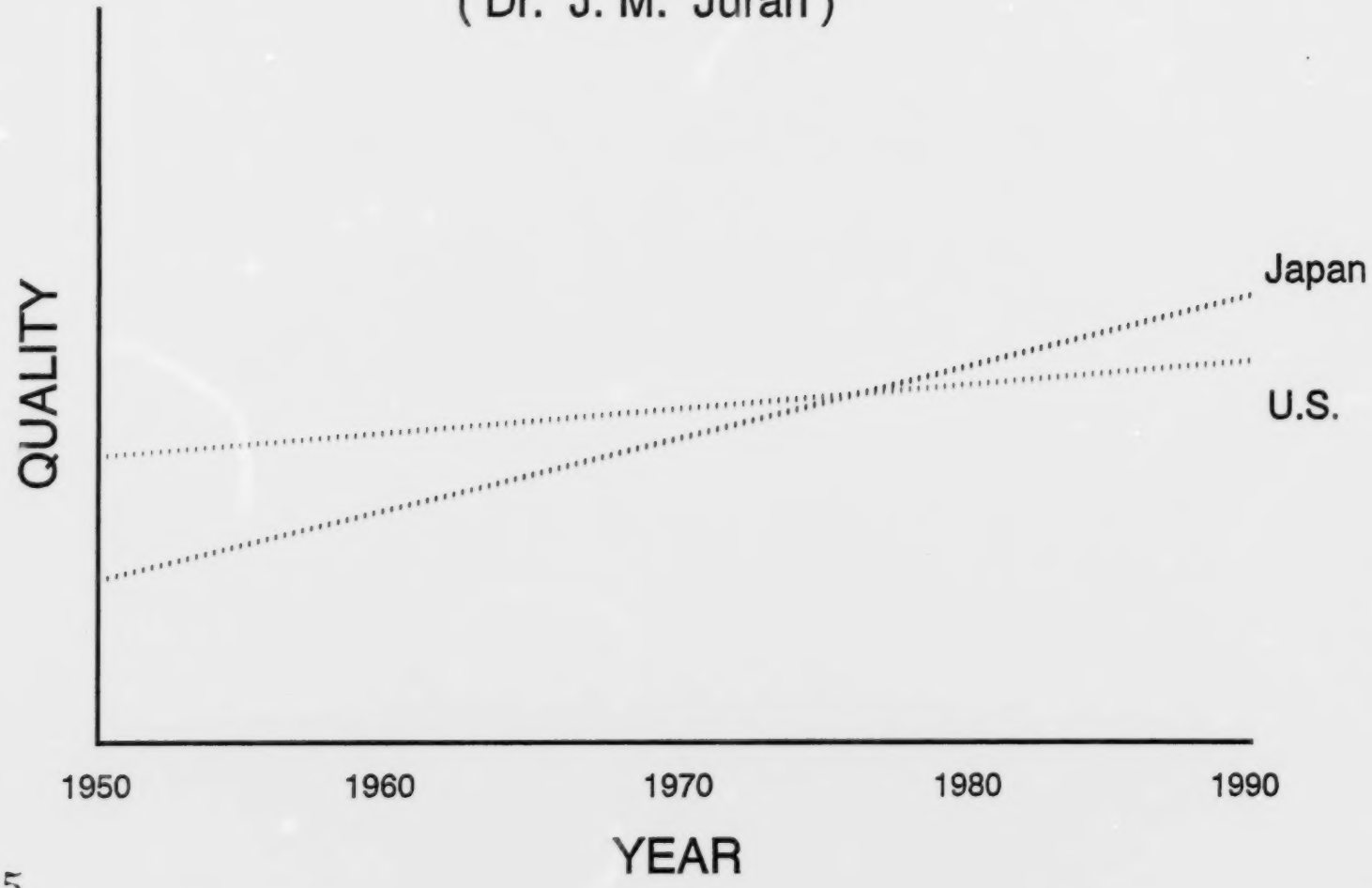
" THE JAPANESE ARE HEADED FOR WORLD QUALITY LEADERSHIP AND WILL ATTAIN IT IN THE NEXT TWO DECADES BECAUSE NO ONE ELSE IS MOVING THERE AT THE SAME PACE. "

-- Joseph M. Juran, June 1966

Japanese Versus U.S. Quality Comparison

(Dr. J. M. Juran)



" QUALITY HAS BECOME A SURVIVAL ISSUE FOR AMERICAN BUSINESS "

-- Jim Olson, CEO, AT&T, 1985

THE SEVEN DEADLY SINS OF U.S. CORPORATIONS

1. INCONSISTENT PRODUCT QUALITY

2. SLOW RESPONSE TO THE MARKETPLACE

3. LACK OF INNOVATIVE, COMPETITIVE PRODUCTS

4. UNCOMPETITIVE COST STRUCTURE

5. INADEQUATE EMPLOYEE INVOLVEMENT

6. UNRESPONSIVE CUSTOMER SERVICE

7. INEFFICIENT RESOURCE ALLOCATION

-- Harvard Business Review - May-June, 1992, p.65

" ALL ORGANIZATIONS ARE PERFECTLY DESIGNED TO GET THE RESULTS THEY GET --- IF YOU DON'T LIKE THE RESULTS YOU'RE GETTING, LOOK AT THE ORGANIZATION'S DESIGN!!! "

-- David Hanna, High Performance Organizations

CD:QUOTE22

THE XEROX STORY

- First Xerox copier (Model 914) introduced in 1959
- Sales grew from $40M in 1960 to $1.7B in 1970
- Employment grew from 2,800 in 1960 to 60,000 in 1970
- IBM entered market in 1970 and Kodak entered in 1975
- Japanese companies entered low end market in late 1970's
- Xerox's market share and profits dropped in late 1970's
- Several attempts were made at management restructuring during late 1970's with no success
- Fuji Xerox (Xerox's Japanese subsidiary) started TQM in 1976 to improve competitive position and won Deming Prize
- In 1982 Xerox visited Fuji Xerox and other Japanese companies
- In 1983 Xerox started on their journey of "leadership through quality" which has transformed the company through TQM principles
- Xerox won 1989 Baldrige Award
- Xerox is only U.S. company which lost market share to Japanese and reversed the trend without government assistance

XEROX CORPORATION

I. 1959 Decline

A. 914 Copier Introduced

1. Costly
2. Unable to sell rights
3. Inability for return investment would bankrupt
4. Xerox brings copier to market itself

a. leased like phones
b. becomes "money pump"
c. 1960-1970 Explosive Growth

II. IBM, Kodak, and Japan competes

A. Task forces formed, benchmarking, employee involvement teams organized

B. "Business Effectiveness" strategy implemented to increase effectiveness and efficiency

C. No authority or support given

D. Managers attend Fuji-Xerox (FX) Quality Circle Convention

III. Concept of Total Quality Control (TQC)

A. 'Leadership through quality' strategy developed

1. Quality principles

a. leadership company
b. understand customers needs
c. provide products/services that meet customer's requirements
d. employee involvement
e. error-free work

2. Management actions and behaviors

   a. assure strategic clarity and consistency
   b. provide visible supportive management practice, commitment, and leadership
   c. establish and reinforce management style of openness, trust, respect, patience, and discipline
   d. establish environment where each can be responsible for quality

3. Quality Tools

   a. Xerox quality policy
   b. Competitive benchmarking, goal setting
   c. Systemic defect and error-prevention processes
   d. Communication/recognition programs
   e. measure for cost of quality (or its lack)

IV. Manufacturing Completely Reorganized

A. Effects of 'Leadership Through Quality'

1. Suppliers narrowed, now involved in early stages of product design, inventories shrink

2. New-product designs now have expected features, characteristics, and reliability

3. Production costs cut in half

4. Product quality improves dramatically

5. Onslaught of Japanese copiers blunted

"Xerox boasts it is the only American company that haw lost market share to Japanese competition and reversed the trend without government assistance."

--Tenner, Arthur R. and Irving J. DeToro. Total Quality Management.

" IN THE WORLD ECONOMY OF TODAY AND TOMORROW, WE WILL COMPETE FOR OUR MARKET SHARE AND OUR ECONOMIC WELL BEING ON THE BASIS OF THE EFFICIENT UTILIZATION OF RESOURCES --- NOT ON TECHNOLOGY. "

-- A. Richard Shores, Survival of the Fittest: Total Quality Control and Management Evolution

TEXAS ECONOMY: PAST AND FUTURE

PAST	FUTURE
LABOR FORCE GROWTH	PRODUCTIVITY
RESOURCE BASED	KNOWLEDGE BASED
COLD WAR	GLOBAL COMPETITION
OIL AND GAS	SERVICES
YOUNG WORKFORCE	DIVERSE WORKFORCE
IN-MIGRATION	NATURAL INCREASE

---------- TECHNOLOGY ----------

-- "The Changing Face of Texas," Report by Texas Comptroller's Office, 1992

WORKFORCE CHALLENGES

(1991 - 2026)

TRENDS AFFECTING THE WORKFORCE:

- GLOBAL COMPETITION
- TECHNOLOGY
- DEMOGRAPHICS

-- "The Changing Face of Texas," Report by Texas Comptroller's Office, 1992

KEYS TO

GLOBAL COMPETITION

- INCREASING PRODUCTIVITY
  (Output per Worker)

- INCREASING THE QUALITY OF GOODS AND SERVICES

- INCREASING THE SPEED OF BRINGING NEW GOODS TO MARKET

-- "The Changing Face of Texas," Report by Texas Comptroller's Office, 1992

KEYS TO

TECHNOLOGY

- INCREASING THE PACE OF CHANGE
- MORE AUTOMATION IN THE SERVICE SECTOR
- CHANGING OCCUPATIONS
- CHANGING THE WORKPLACE

-- "The Changing Face of Texas," Report by Texas Comptroller's Office, 1992

" EDUCATION IS THE MOST SERIOUS CHALLENGE THE STATE OF TEXAS FACES. "

-- David H. Blake, Dean of Cox School of Business, SMU

CHANGING DEMOGRAPHICS

IN TEXAS

- NO MAJORITY POPULATION BY 2025
- MOST ENTRANTS INTO THE WORKFORCE WILL BE FEMALE, IMMIGRANTS, MINORITIES
- SLUGGISH ECONOMIC GROWTH WILL MEAN MORE WOMEN AND YOUTH WILL ENTER THE WORKFORCE
- THREE FOURTHS OF THE WORKFORCE FOR THE FUTURE IS ALREADY IN THE WORKFORCE

-- "The Changing Face of Texas," Report by Texas Comptroller's Office, 1992

WORKFORCE CHALLENGES

IN TEXAS

THE IMPLICATIONS:

- IMPROVE THE QUALITY & EFFICIENCY OF EDUCATION
- DEVELOP A SYSTEM OF SCHOOL-TO-WORK TRANSITION
- DEVELOP A SYSTEM TO SUPPORT LIFELONG LEARNING
- RESTRUCTURE THE WORKPLACE
- ENCOURAGE COOPERATION AND INVOLVEMENT (GOVERNMENT/ EDUCATION/INDUSTRY)

LEADERSHIP !!!

-- "The Changing Face of Texas," Report by Texas Comptroller's Office, 1992

" UNDERLYING THE ENTIRE SOCIAL DEFICIT IS THE LARGEST SINGLE PROBLEMS AMERICANS FACE --- **EDUCATION**."

-- Lloyd Dobyns and Clare Crawford-Mason, Quality or Else

" WE CANNOT COMPETE IN A WORLD ENVIRONMENT BY USING OUR BRAINS AND DOING QUALITY WORK THE WAY WE ARE RIGHT NOW. IF WE'RE GOING TO PRODUCE QUALITY GOODS, WE HAVE TO HAVE BRIGHTER PEOPLE TO WORK IN THE HIGH TECHNOLOGY AREAS, AND WE HAVEN'T. FIFTY-THREE PERCENT OF ALL OUR PEOPLE IN THE PH.D PROGRAMS IN THE WHOLE U.S. ARE FOREIGNERS, BECAUSE OUR STUDENTS CAN'T QUALIFY.....SECOND, OUR KIDS CAN'T READ. WE ARE TWENTIETH OUT OF TWENTY INDUSTRIALIZED COUNTRIES IN THE EDUCATION AREA. THERE IS NO ONE AS BAD OFF AS WE ARE. THAT'S NOT THE WORST PART. THE WORST PART IS OUR UPPER TENTH--OUR BRIGHTEST KIDS--DON'T MEASURE UP TO THE AVERAGE OF THE OTHER NINETEEN COUNTRIES."

--Marvin Cetron, American Renaissance

" IF AMERICANS ARE TRULY INTERESTED IN UPGRADING THEIR SCHOOLS, PARENTS MUST BEGIN BY TAKING MORE (OR AT LEAST SOME) RESPONSIBILITY FOR THEIR CHILDREN'S SUCCESS INSTEAD OF EXPECTING THE SCHOOLS TO DO IT ALL. "

-- John Stiles, "Educational Leadership," March, 1992

SCHOOL PROBLEMS

(FROM THE STUDENT'S PERSPECTIVE)

(IN DESCENDING ORDER)

IN THE 1940's:

1. Talking in class
2. Chewing gum
3. Making noise
4. Running in the halls
5. Getting out of turn in line
6. Improper clothes
7. Not putting paper in trash cans

IN THE 1980's:

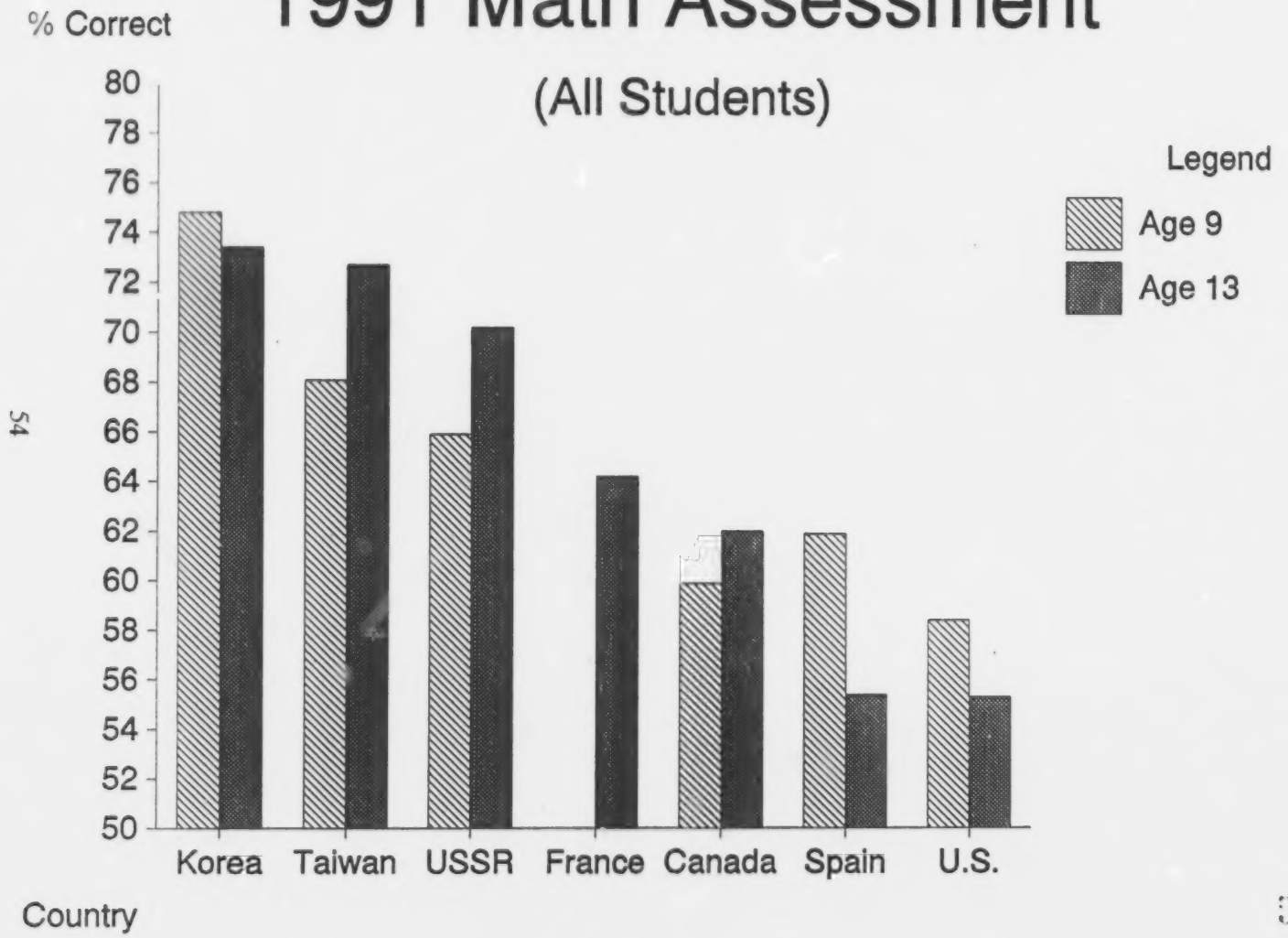
1. Drug abuse
2. Alcohol abuse
3. Pregnancy
4. Suicide
5. Rape
6. Robbery
7. Assault

-- Source: Surveys conducted by the California Department of Education

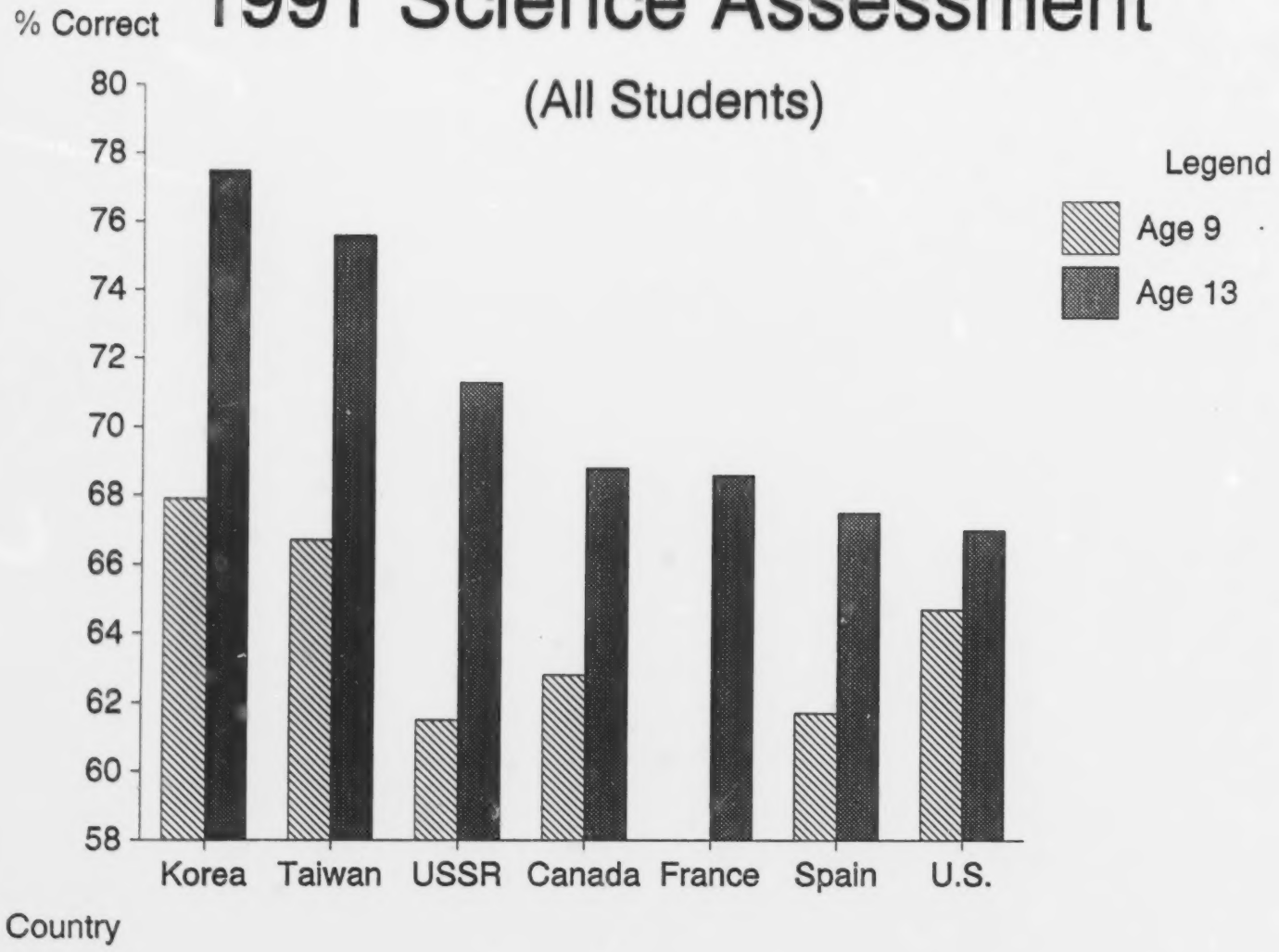
" AMERICAN CHILDREN MAY BE MORE ISOLATED FROM THEIR PARENTS THAN CHILDREN OF OTHER COUNTRIES. THE RESULT, UNFORTUNATELY, MAY OFTEN TRANSLATE DIRECTLY TO APATHY AND LOW ACADEMIC ACHIEVEMENT. "

-- John Stiles, "Educational Leadership," March, 1992

1991 Math Assessment



1991 Science Assessment



STUDENTS

-- Ninety-three percent of 17-year-olds do not have the "capacity to apply mathematical operations in a variety of problem settings" (National Assessment of Educational Progress, 1988).

-- From 1986 through 1992, an average of 28% of non-college-bound white high school graduates and 54% of black graduates had no job four months after graduating from high school (Bureau of Labor Statistics, 1989, 1991)

-- Between 1971 and 1988, inflation-adjusted wages fell 17.3% for young male high school graduates and 10% for young female graduates (Katz and Murphy, 1990).

-- Fewer than 1% of American high school students take Advanced Placement (AP) chemistry or AP physics, and only 2.3% took the AP calculus exam. In contrast, 25% of all Canadian 18-year olds are studying science that is comparible to AP courses in the United States.

-- The 1.25 grade-level-equivalent decline in the academic achievement of high school seniors between 1967 and 1980 lowered the nation's productivity by $86 billion in 1987 and will lower it by more than $200 billion annually by the year 2010 (Bishop, March, 1989).

-- Only 20% of 10th graders believe that biology, chemistry, physics or geometry is needed to qualify for their first-choice occupation. Only 28% percent believe they need algebra (LSAY 1988, BA24B-BA25D).

EDUCATION FACTS

- American business spends over $25 billion a year on remedial education and training.

- Motorola Inc. estimates that half its workers need remedial work to attain fifth-grade skill levels in math and seventh-grade skills in English.

- Trane Incorporated in Waco tested applicants using a basic skills test in math and English written at the sixth grade level. 50% of the applicants didn't pass the test.

- Southwestern Bell Telephone Company had to process 15,000 application forms to come up with 3,700 applicants for its hiring test. Only 800 of those applicants managed to pass the entry level examination.

- Domino's Pizza had to spend $50,000 to teach its bakers how to read well enough to understand simple doughmaking instructions.

- The U.S. spent over $3,310 per student in 1985. Japan spends an average of $1,805 per student, yet seems to get a better return on its investment. The drop-out rate in Japan is 6%, compared to 25% in the U.S.

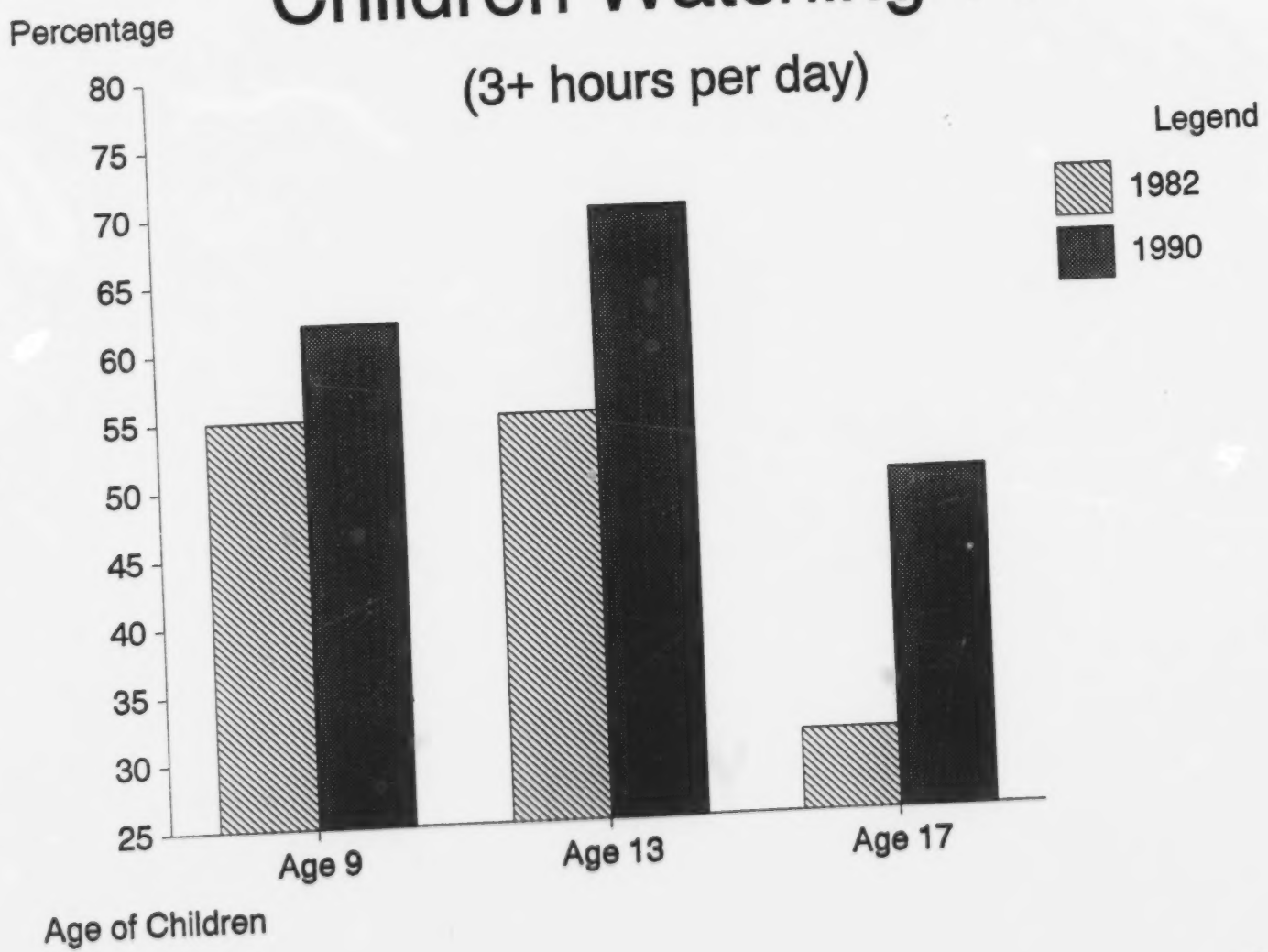
STUDENT PREPAREDNESS

Opinion Expressed By:	Students Prepared for the Job Market	Ability to Get Along with Others	Ability to Solve Complex Problems
Student	70%	72%	70%
Parents	65%	77%	65%
Employers	30%	50%	10%

-- "Career Counselling for the '90's" presented by Lisa Lowry, TASA/TASB Convention, 1992

Children Watching TV

(3+ hours per day)



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" THE UNITED STATES IS THE ONLY INDUSTRIALIZED NATION WITH NO SYSTEM OF TRADE/TECHNOLOGY SCHOOLS OR APPRENTICESHIP PROGRAMS."

-- Larry Pettersen, "Educational Leadership," March, 1992

" NOWHERE DOES THE GAP BETWEEN THE U.S. AND JAPANESE EDUCATIONAL SYSTEMS STAND OUT IN SHARPER RELIEF THAN IN JAPAN'S TECHNICAL SCHOOLS."

-- Larry Pettersen, "Educational Leadership," March, 1992

" MY STUDIES SHOW THAT EUROPEAN AND ASIAN CHILDREN SPEND TWICE AS MUCH TIME WITH THEIR FAMILIES AS AMERICANS SPENT WITH THEIRS."

(AMERICAN STUDENTS HAD TWICE AS HIGH FAILURE RATES AS THE EUROPEAN AND ASIAN STUDENTS)

-- John Stiles, "Educational Leadership," March, 1992

" THE PROBLEM IS NOT THAT SCHOOLS HAVE GONE TO HELL IN A HANDBASKET; IT'S THAT THE NATURE OF THE WORLD ECONOMY HAS CHANGED DRAMATICALLY IN THE LAST 20 OR 25 YEARS AND THE SCHOOLS HAVE NOT CHANGED WITH IT."

-- Marc Tucker, President of the National Center on Education and the Economy

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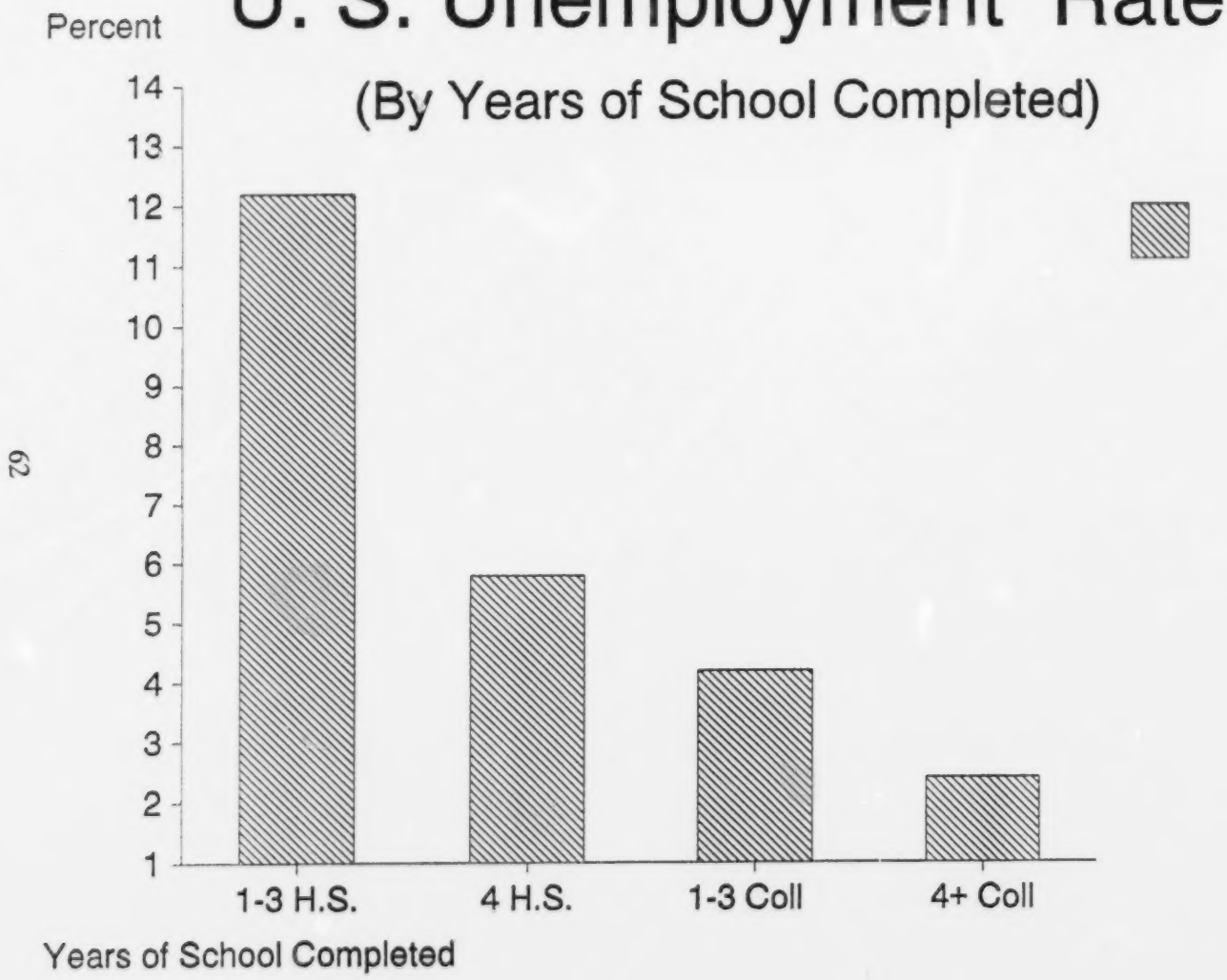
" I think I know what the problem is, and politicians don't dare say it. The problem is we've got a lot of dumb kids. Dumb kids are hard to teach. The best educators in the world can't teach a fence post. These kids weren't born dumb. Their mothers and fathers -- if they had a father around -- never made it clear how important an education is. The parents don't care, so the kids don't care.

Maybe we ought to encourage some mothers and fathers to go to school at night instead of watching television. This isn't two or three kids at the bottom of the class we are talking about. This is about 50 percent of all kids in the country. For better schools, what we need isn't better teachers. What we need is better students, and to get better students, we'll have to start with better parents, because that's where the problem lies. "

-- Andy Rooney

U. S. Unemployment Rate



BARRIERS TO SUCCESS IN SCHOOLS

-- Failure to Recognize / Acknowledge Problem(s)

-- Political Climate - Lack of Focus/Agreement

-- Fragmented Curriculum -- "What Do We Want?"

-- Resistance to Improvement

-- High Expectations for Some - Lower for Others

-- Demographic Shifts

-- Failure to Provide Enough Staff Development

-- Refusing to Use "Best Practice"

-- Unable to Use "Breakthrough Thinking" to Improve

-- Quality School Training, Institute for Reality Therapy

OBSTACLES TO GOOD EDUCATION

-- College Prep is the Only Measure of Excellence

-- The Curriculum has Become Disconnected from Real World Requirements

-- Scant Attention Has Been Given to Continued Learning Throughout Life

-- Little Attention Has Been Given to the Great Range Between Students

-- Graduates Cannot Meet the Entry Requirements to Enter Jobs in Business and Industry

-- Presentation on Tech Prep, TASA/TASB Convention, 1992

SEVEN MISASSUMPTIONS IN EDUCATION

1. The best way to learn is to have it taught to you.

2. Educators know what students need to know when they get out of school. (Learn how to learn is right.)

3. There is a failure to distinguish between problems, exercises, and questions. (We must extract problems from reality.)

4. We refuse to allow certain questions to be asked. (creativity) We kill creativity with the examination process.

5. Examinations are an adequate model of how things occur in the real world. (collaborative learning)

6. Reality is organized the way schools are. (Problems occur across bounds like math and science.)

7. Content of the human mind is divided into two areas: information and knowledge.

Where Time Is Currently Spent:	
	o Data
90%	o Information (Processed Data)(who, what, when, where)
9%	o Knowledge (How to do)
1%	o Understanding (Why)
	o Wisdom

-- Dr. Russell L. Ackoff, Governor's Conference on Quality in Education, November 9, 1992

" THE CONSEQUENCES OF NOT ACCEPTING THESE EDUCATION CHALLENGES WOULD BE A FAIRLY STEEP DIVE INTO THIRD WORLD STATUS. IT'S AS SIMPLE AS THAT."

-- Marc Tucker, President of the National Center on Education and the Economy

" IF IT TURNS OUT THAT OUR SCHOOLS ARE DOING WHAT WE WANT THEM TO DO, BUT ARE NOT ACHIEVING WHAT WE WANT THEM TO ACHIEVE, IT MAY BE BECAUSE WE WANT THEM TO DO THE WRONG THING."

-- Phillip Schlechty and Robert Cole, "Educational Leadership," Nov. 1992

" TO BE EFFECTIVE, EDUCATION IN QUALITY MUST BE A PROCESS EXTENDING FROM THE LOWER GRADES THROUGH THE UNIVERSITY."

-- Armand V. Fiegenbaum

EDUCATION QUALITY PRINCIPLES

- All stakeholders must recognize the need for change.
- A shared vision.
- Identification of customers/suppliers.
- Teaming and empowerment.
- Leaders with commitment and skills.
- Wholistic assessment and continuous improvement.
- Willing to initiate change.
- All stakeholders must be educated/trained.
- Delivery system must reflect the needs of the learner, the community and society.
- An environment of trust.

-- "Quality & Education: Critical Linkages, National Outcomes Team Report"

THE EDUCATION QUALITY PRINCIPLES

- All stakeholders must recognize the need for change to make America's education system competitive internationally.
- A shared vision, mission, and strategic plan must provide the direction for change.
- The identification of customers/suppliers, and their roles and responsibilities to each other is paramount.
- Teaming and empowerment are essential for all stakeholders.
- Leaders with commitment and skills for quality education must provide the direction.
- Wholistic assessment and continuous improvement of both participants and the education system must be implemented.
- Each unit of the education system must be willing to initiate change.
- All stakeholders must be educated/trained not only on education quality principles, concepts, and tools, but also be knowledgeable and skilled in the subject area to be addressed.
- The instructional delivery system must reflect the needs of the learner, the community and society.
- An environment of trust must be created.

-- "Quality & Education: Critical Linkages, National Outcomes Team Report"

" WORKFORCE SKILLS WILL BE
THE KEY COMPETITIVE DRIVER
OF THE 21ST CENTURY. "

-- "The Changing Face of Texas," Report by
Texas Comptroller's Office, 1992

"OUR WORKFORCE IS TEXAS' STRONGEST
ASSET. WE MUST REFOCUS OUR
EDUCATIONAL PROGRAMS TO ADDRESS
THE NEW SKILLS REQUIRED."

– John Sharp, Comptroller of Texas, in a speech on 10/27/92

"IF WE'RE STANDING STILL,
WE'RE MOVING BACKWARDS."

– Sam Walton

" TOTAL QUALITY MANAGEMENT "
(TQM)

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June 1, 1993

TOTAL QUALITY MANAGEMENT (TQM)

WHAT IS TQM ?

-- DEFINITION

-- PHILOSOPHY

-- WHAT IT IS

-- WHAT IT ISN'T

-- CHARACTERISTICS OF TQM

DEFINITION OF QUALITY:

-- The degree of excellence which a thing possesses; excellence, superiority

-- Webster's New World Dictionary

-- excellence is defined as the fact or condition of excelling; superiority; surpassing goodness, merit, etc.

-- Conformance to specifications

-- Fitness for use

-- Joseph Juran

-- A fitness of a process, a product or a service relative to its intended purpose

-- Homer Sarasohn

-- Quality is not just what you see on the surface, but what is underneath the surface.

-- Daniel Yankelovich

-- Conformance to requirements

-- Phil Crosby

-- Absence of defects

-- "Consumers now have choices from around the world. Choices may be made on the basis of price; on the basis of features, variety, and service; on the basis of responsiveness; on the basis of quality. All of these factor in purchase decisions -- price, features, variety, service, responsiveness, and quality, not just quality alone -- are addressed in an integrated way in total quality management."

-- Curt Reimann, associate director for Quality Programs at the National Institute of Standards and Technology

-- Quality is difficult to describe, but easy to recognize.

-- Even though quality can't be described, you know what quality is.

-- Robert Pirsig, Zen and the Art of Motorcycle Maintenance

QUALITY DEFINITION

1970'S: CONFORM TO PRODUCT REQUIREMENTS

1980'S: CONFORM TO CUSTOMER EXPECTATIONS

1990'S: EXCEED CUSTOMER EXPECTATIONS

" TOTAL QUALITY IS BETTER QUALITY AND BETTER COST "

-- Edwin Artzt, CEO, P&G, 1985

" OUR GENERAL SYSTEMS SURVEY OF BUYER PREFERENCES IN BOTH CONSUMER AND IN INDUSTRIAL MARKETS (IN THE UNITES STATES) AT THE END OF 1988 SHOWED THAT EIGHT OUT OF TEN BUYERS PUT QUALITY AHEAD OF PRICE OR EQUAL TO PRICE IN THEIR BUY PREFERENCE. IN 1979, IT WAS THREE OUT OF TEN. "

-- Armand Feigenbaum, "America on the Threshold of Quality," Quality, January, 1990

QUALITY

DRIVES

PRODUCTIVITY

WHICH DRIVES

STANDARD OF LIVING

TOTAL QUALITY MANAGEMENT (TQM)

DEFINITION OF TQM:

-- A cooperative form of doing business that relies on the talents and capabilities of both labor and management to continually improve quality and productivity using teams

-- Joseph R. Jablonski

-- TQM is a way of thinking and working to achieve continuous improvement through employee involvement and a focus on customers.

-- Resource Guide for Total Quality Management in Texas Schools (April, 1992)

-- Doing the right thing, right the first time, all the time; always striving for improvement; and always satisfying the customer.

-- Quality Through Leadership: TQM in Action by Watson and Schmidt

-- TQM is a customer driven approach to operating an organization that combines the talents of labor and management cooperatively to continually improve quality and productivity using teams and fact-based scientific methodologies.

-- TQM/Tech Prep Curriculum Development Grant Proposal -- Temple Junior College (April, 1992)

-- TQM is "Doing the right thing, right the first time, on time, all the time; always striving for improvement, and always satisfying the customer."

-- Department of Defense TQM Implementation Guide

-- Total Quality Management is both a philosophy and a set of guiding principles that represent the foundation of a continuously improving organization. TQM is the application of quantitative methods and human resources to improve the material and services supplied to an organization, all the processes within an organization, and the degree to which the needs of the customer are met, now and in the future.

-- Official Department of Defense Definition

-- TQM is organized common sense -- it's so obviously right.

-- Ellen Earle Chaffee, Vice Chancellor of academic affairs at North Dakota's higher education system as quoted to Daniel Seymour in his book: On Q: Causing Quality in Higher Education

PHILOSOPHICAL FOUNDATIONS

1. An organization is a system, with inputs, outputs, processing, users, and feedback loops. Schools are a System!

2. Any System has certain capabilities and limitations.

3. Quality is a perception, and perceptions change.

4. The quest for quality is not an End...it is a Journey, always changing.

5. Continuous improvement is a way of life.

6. Improvement is incremental, and is measured by data, not intuition.

7. Wisdom & talent reside at all levels in an organization.

8. Customer Delight is the aim of any system.

– Michigan Partnership for New Education

TQM PHILOSOPHY

- The problem is the process --- The solution is people.
- Improving quality by removing the causes of problems in the system inevitably leads to improved productivity.
- People want to do their jobs well.
- Every person wants to feel like a valued contributor
- The person doing the job is the most knowledgeable about doing that job.
- Teamwork can accomplish more than an individual.
- A structured problem solving process using graphical techniques produces better solutions than an unstructured process.
- Graphical problem solving techniques let you know where you are, where the variations lie, the relative importance of problems to be solved, and whether the changes made have had the desired impact.

-- Presentation by Dr. Bryan Cole, Texas A&M University

TOTAL QUALITY MANAGEMENT (TQM)

WHAT IT IS:

-- A philosophy for conducting business

-- A fundamental new way of thinking

-- A change in the "old" way of thinking

-- An unending focus on customer satisfaction

-- A commitment to an attitude of continuous improvement

-- Employee involvement through empowerment

-- A "long term" commitment

-- Leadership instead of management

-- Prevention versus reaction

-- A focus on the underlying processes

TOTAL QUALITY MANAGEMENT (TQM)

WHAT IT ISN'T:

-- This year's program

-- A set of meaningless "buzz words"

-- A methodology for the inspection of parts

-- A reaction to defects or errors

-- A "one time" effort

-- A "cure all" for what ails you

-- Simple or easy

-- A spectator sport

PRINCIPLES OF TQM

1. Customer Focus

2. A Focus on Process as Well as the Results

3. Prevention versus Inspection

4. Mobilization of the Expertise of the Workforce

5. Fact-Based Decision Making

6. Measurement and Feedback

-- Joseph R. Jablonski, Implementing TQM

TOTAL QUALITY MANAGEMENT (TQM)

CHARACTERISTICS OF TQM:

-- The highest level of management must be totally committed for it's implementation to succeed.

-- It normally takes a "cultural change" to occur within an organization before TQM can succeed.

-- TQM represents a revolution in management philosophy but an evolution in implementation.

-- It is a cooperative effort by everyone.

-- There are four cornerstones in TQM:

1. Commitment to customer satisfaction

2. Commitment to continuous improvement

3. Empowered employees

4. Teamwork

-- It will take from five to ten years before the principles of TQM become a permanent part of the fabric of an organization.

CORNERSTONES OF TQM

1. COMMITMENT TO CUSTOMER SATISFACTION

2. COMMITMENT TO CONTINUOUS IMPROVEMENT

3. EMPOWERED EMPLOYEES

4. TEAMWORK

TOTAL QUALITY CULTURE

CHARACTERISTICS:

- Listens to customers (both internal and external) and strives continuously to meet their expectations.
- Empowers the work force to take ownership of quality and do something about it, which in turn generates a pride of belonging to the organization.
- Has management by open decision making and shared responsibility, where managers become leaders and teachers.
- Sees prevention of problems as a way of life.
- Uses systematic approaches and recognizes that systems provide a major opportunity for improvements.
- Is measured by customer satisfaction.
- Is guided by a vision of the future and has a plan to get there.

--Mahtomedi Public Schools, Mahtomedi, Minnesota

TOTAL QUALITY MANAGEMENT (TQM)

WHEN DID TQM BEGIN ?

-- EARLY BASIS

-- QUANTITY VS QUALITY

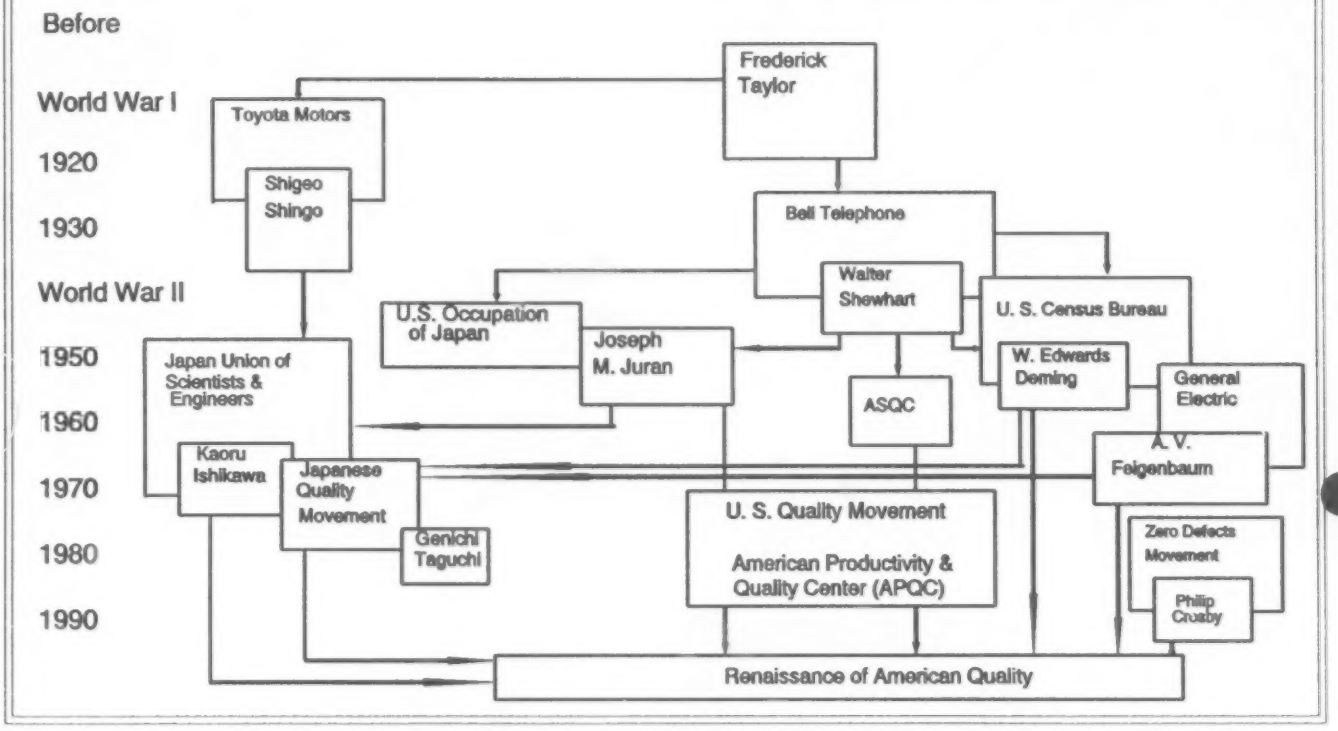
-- JAPAN AFTER WORLD WAR II

-- IF JAPAN CAN, WHY CAN'T WE ?

-- UNITED STATES AFTER 1980

-- WHAT NEXT ?

Quality's Family Tree



– "Investment for Survival", Texas Department of Commerce
Quality Texas Presentation

TOTAL QUALITY MANAGEMENT (TQM)

HOW DO YOU IMPLEMENT TQM ?

-- THROUGH INITIATIVES

-- THROUGH TOOLS

-- THROUGH AWARDS

-- OUT OF NECESSITY

TOTAL QUALITY MANAGEMENT (TQM)

HOW DO YOU IMPLEMENT TQM ?

-- THROUGH INITIATIVES:

-- FOCUS ON THE CUSTOMER / CUSTOMER SATISFACTION

-- EMPLOYEE EMPOWERMENT

-- CONTINUOUS IMPROVEMENT

-- BENCHMARKING

-- LEADERSHIP

-- SHARED VISION / CONSTANCY OF PURPOSE

-- TRAINING / EDUCATION

-- QUALITY MEASUREMENT / ASSESSMENT

-- REDUCED CYCLE TIME

-- ELIMINATION OF WASTE / DEFECTS

-- TEAMWORK / SELF-DIRECTED TEAMS / QUALITY IMPROVEMENT TEAMS

TOTAL QUALITY MANAGEMENT (TQM)

HOW DO YOU IMPLEMENT TQM ?

-- THROUGH TOOLS:

- -- BRAINSTORMING
- -- BENCHMARKING
- -- NOMINAL GROUP TECHNIQUES (NGT)
- -- PROCESS FLOW DIAGRAMS
- -- SURVEYS (CUSTOMER)
- -- PARETO CHARTS
- -- QUALITY FUNCTIONAL DEPLOYMENT (QFD)
- -- CAUSE AND EFFECT DIAGRAMS (FISHBONE DIAGRAMS)
- -- STATISTICAL TECHNIQUES

TOTAL QUALITY MANAGEMENT (TQM)

HOW DO YOU IMPLEMENT TQM ?

-- THROUGH AWARDS:

-- BALDRIGE AWARD

-- DEMING AWARD

-- OUT OF NECESSITY:

-- ISO 9000

CHARACTERISTICS OF A QUALITY ORGANIZATION

-- IT IS "NEEDS" SATISFYING

-- IT IS OUTCOME DRIVEN

-- IT USES CONSENSUS

-- IT IS A PLACE OF CONTINUOUS LEARNING

-- IT IS FOCUSED ON THE FUTURE

-- IT USES BREAKTHROUGH THINKING (DON'T THROW OUT WHAT WORKS - KEEP DOING WHAT WORKS)

THE QUALITY IMPLEMENTATION PROCESS

FOUR STEPS:

1. Awareness

2. Involvement

3. Commitment

4. Ownership

--Richard S. Johnson, "TQM: Leadership for the Quality Transformation"

THE QUALITY IMPLEMENTATION PROCESS

Awareness:

1. Directive leadership
2. Vision creation
3. Process audit
4. Determine process requirements
5. Determine equipment requirements
6. Educate (quality concepts)
7. Communicate the need

--Richard S. Johnson, "TQM: Leadership for the Quality Transformation"

THE QUALITY IMPLEMENTATION PROCESS

Involvement:

1. Coaching leadership
2. Develop a support structure
3. Develop the mission
4. Determine asset requirements
5. Review process capabilities
6. Develop training
7. Conceive a quality environment
8. Communicate the vision

--Richard S. Johnson, "TQM: Leadership for the Quality Transformation"

THE QUALITY IMPLEMENTATION PROCESS

Commitment:

1. Participative leadership
2. Demonstrate commitment
3. Develop goals
4. Promote change
5. Develop teams
6. Develop recognition system
7. Solve problems
8. Implement suggestions
9. Energize the quality environment

--Richard S. Johnson, "TQM: Leadership for the Quality Transformation"

THE QUALITY IMPLEMENTATION PROCESS

Ownership:

1. Delegatory leadership
2. Empower work force
3. Encourage team improvements
4. Recognize achievement
5. Reward success
6. Share benefits

--Richard S. Johnson, "TQM: Leadership for the Quality Transformation"

ESSENTIAL ITEMS FOR TOP MANAGEMENT

IN A QUALITY PROGRAM

1. **VERY STRONG LEADERSHIP FROM THE TOP** SO THAT EVERYONE UNDERSTANDS THAT THE QUALITY PROGRAM IS MOST IMPORTANT.

2. THE EXECUTIVE TEAM MUST **CHANGE THE WAY THEY OPERATE** WITH THEIR MANAGEMENT, THEY MUST **EMPOWER** THEIR MANAGEMENT TEAM, THEY MUST **DELEGATE** MUCH MORE **POWER AND AUTHORITY** TO THEIR MANAGEMENT TEAM, JUST LIKE THEY'RE ASKING MANAGERS TO DO WITH EMPLOYEES.

3. MAKE SURE IN EVERYTHING THEY DO, THEY **WALK LIKE THEY TALK**

-- Steve Schwartz, IBM

C:SCHWARTZ

" EXPORT ANYTHING TO A FRIENDLY COUNTRY EXCEPT AMERICAN MANAGEMENT. THE GREATEST MISTAKE I EVER MADE WAS IN TEACHING QUALITY TO AMERICAN ENGINEERS AND TECHNICIANS, BUT NOT THEIR BOSSES, DURING THE WAR. ENGINEERS AND TECHNICIANS MAKE PRODUCTS, BOSSES MAKE POLICY, AND THE DECISION TO PRODUCE QUALITY IS A POLICY DECISION. "

-- W. Edwards Deming

" IN FACT, TO OUR KNOWLEDGE, EVERY SUCCESSFUL QUALITY REVOLUTION HAS INCLUDED THE PARTICIPATION OF UPPER MANAGEMENT. WE KNOW OF **NO EXCEPTIONS.** "

-- Joseph M. Juran

STAGES OF QUALITY TRANSFORMATION

STAGE ONE: The Decision to Adopt the Fundamental Changes

STAGE TWO: Incubation Ending with Vision

STAGE THREE: Planning and Promotion

STAGE FOUR: Education

STAGE FIVE: Neverending Improvement

-- From Deming Management at Work by Mary Walton

APPROACH TO TQM IMPLEMENTATION

- TQM Awareness to Leadership
- Leadership Accepts the Need for Change
- Top Manager Commitment to TQM
- Key Management Training in TQM
- Develop Organizational Vision
- Develop TQM Implementation Plan
- General Organizational Awareness
- Key Trainer Education
- Pilot Projects Established
- Assessment and Modification
- Widen the Circles

TOTAL QUALITY INITIATIVES

IMPLEMENTATION STRATEGY

-- MANAGEMENT / WORKPLACE BRIEFINGS

-- ESTABLISHMENT OF A QUALITY COUNCIL

-- DEVELOPMENT OF A VISION STRATEGY

-- WORKPLACE ASSESSMENT AND FEEDBACK

-- INTRODUCTION TO QUALITY PRINCIPLES

-- CUSTOMIZED FACILITATOR TRAINING

-- EVALUATION, FEEDBACK AND MEASUREMENT

-- PROCESS FOLLOW-UP AND GUIDANCE

-- Presentation on Implementing Quality Initiatives, TASA/TASB Convention, 1992

C:IMPSTRAT

" QUALITY RESULTS DEPEND UPON THE FREQUENCY OF INFORMED INTERACTION BETWEEN CARING WORKERS AND THE PRODUCTS OF THEIR WORK. "

-- Lewis Rhodes, Governor's Conference on Quality and Education, 1992

ESSENTIAL ELEMENTS TO THE SUCCESS OF TQM

- CULTURAL CHANGE
- A FOCUS ON THE CUSTOMER
- A LONG TERM COMMITMENT
- TOP MANAGEMENT SUPPORT
- EMPLOYEE INVOLVEMENT
- EFFECTIVE AND RENEWED COMMUNICATIONS
- RELIANCE ON STANDARDS AND MEASUREMENTS
- COMMITMENT TO TRAINING
- REWARDS AND RECOGNITION

" MOST QUALITY PROGRAMS FAIL FOR ONE OF TWO REASONS: THEY HAVE SYSTEM WITHOUT PASSION, OR PASSION WITHOUT SYSTEM. "

-- Tom Peters

BARRIERS TO SUCCESS IN SCHOOLS

-- Failure to Recognize / Acknowledge Problem(s)

-- Political Climate - Lack of Focus/Agreement

-- Fragmented Curriculum -- "What Do We Want?"

-- Resistance to Improvement

-- High Expectations for Some - Lower for Others

-- Demographic Shifts

-- Failure to Provide Enough Staff Development

-- Refusing to Use "Best Practice"

-- Unable to Use "Breakthrough Thinking" to Improve

-- Quality School Training, Institute for Reality Therapy

" QUALITY GURUS "

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June 1, 1993

TOTAL QUALITY MANAGEMENT (TQM)

WHO IS TQM ?

-- SARASOHN & PROTZMAN

-- DEMING

-- JURAN

-- SHEWHART

-- FEIGENBAUM

-- CROSBY

-- GLASSER

-- ISHIKAWA

-- TAGUCHI

-- ET AL !!

WHO IS TQM ?

SARASOHN & PROTZMAN:

Homer M. Sarasohn:

-- Twenty-nine year old systems and electronic engineer when he went to Japan in February, 1946.

-- MacArthur wanted radios for propaganda but Japanese couldn't supply them.

-- Worked for the Civil Communications Section (CCS) to teach the Japanese how to manage technology, in particular how to manage a factory.

-- Co-authored a textbook, **The CCS Management Seminar** with Charles W. Protzman.

-- Held a 252 hour seminar which he forced the chief executives of many key Japanese companies to attend.

-- He wanted quality control taught to the Japanese by Walter Shewhart (He wasn't available, so government turned to W. Edwards Deming).

-- Returned to the U.S. in 1950.

SARASOHN & PROTZMAN: (Continued)

Charles W. Protzman:

-- Joined Sarasohn in Japan in 1948 as a forty-eight year old engineer from Western Electric.

-- Worked for the Civil Communications Section (CCS) to teach the Japanese how to manage technology.

-- Co-authored a textbook, **The CCS Management Seminar** with Homer M. Sarasohn.

-- Worked with Sarasohn to teach seminars to Japanese until he returned to the U.S. in 1950.

-- Rejoined Western Electric and tried to teach them the same principals of quality management. His son says he was demoted for his efforts.

WHO IS TQM ?

W. EDWARDS DEMING:

-- Born in 1900. He grew up in a tarpaper shack in Wyoming. He had his first job in a hotel at age 8 or 9.

-- He studied engineering at the University of Wyoming starting in 1917. He later decided to do research in mathematics.

-- His doctorate is in mathematical physics.

-- He worked in research and development at Western Electric. He didn't meet Shewhart until later in New York and Washington.

-- In the 30's Deming used Shewhart's statistical approach to train clerks at the U.S. Census Bureau and to establish sampling techniques for census work.

-- He invited Shewhart to lecture at the Graduate School in the Department of Agriculture in March, 1938. Deming spent the next year studying, editing and clarifying the lectures for publication. They were published in 1939 as **Statistical Method from the Viewpoint of Quality Control.**

-- He helped the U.S occupation forces in Japan shortly after World War II to use statistical sampling techniques to get reliable Japanese population figures.

-- He was invited to teach quality control to Japanese managers when Shewhart was not available.

W. EDWARDS DEMING: (Cont.)

-- Deming taught "Elementary Principles of the Statistical Control of Quality" to 230 Japanese engineers and technicians through a translator in July 1950.

-- The Deming Prize was established by the Japanese Union of Scientists and Engineers in December 1950 to honor Dr. Deming. It was funded from royalties from his publications and today is Japan's highest quality award.

-- He was awarded the Second Order Medal of the Sacred Treasure, the highest award Japan can bestow on a foreigner, in 1960.

-- He made repeated visits to Japan over the next two decades, not only to teach statistical methods but also to counsel the managers.

-- He was not widely known in the U.S.(his seminars were only attended by a dozen or so in the 1970's), until an NBC "White Paper" entitled "If Japan Can, Why Can't We?" focusing on Japan's emphasis on quality and highlighting Dr. Deming was aired in 1980.

-- He began to consult with large companies such as Ford and General Motors during the '80's.

-- He is "fourteen points" and concept of "profound knowledge" are widely known.

-- Deming's work is more philosophical than that of the other quality experts. Those who believe in his method tend to refer to themselves as "disciples."

-- His four-day seminars are attended by hundreds. He continues to run his one-man consulting service from the basement of his home in Washington, D.C. with the help of one secretary.

" IF I HAD TO SUMMARIZE IT (MY PHILOSOPHY) IN A FEW WORDS, IT WOULD HAVE SOMETHING TO DO WITH PRIDE IN WORK. "

-- W. Edwards Deming

WHO IS TQM ?

JOSEPH M. JURAN:

-- Born in 1904 in Romania. His family immigrated to the U.S. when he was eight. He lived in a tarpaper shack in Minnesota. His early career included shining shoes in Minneapolis.

-- He joined Western Electric in Chicago in 1924, directly out of engineering school. He had no plans to enter quality, but his first assignment was in the inspection branch.

-- He knew Shewhart during his time at Western Electric.

-- He became a freelance quality consultant after World War II.

-- His book, **Quality Control Handbook**, published in 1951 got him his first invitation to Japan in 1954, where his book was translated into Japanese in time for his visit.

-- In July 1954, Juran lectured in Tokyo and Osaka to top management as well to department managers and supervisors. These lectures created an atmosphere in which quality control was to be regarded as a tool of management.

-- Deming wrote of Juran's 1954 visit, "His masterful teaching gave to Japanese management new insight into management's responsibility for improved quality and productivity."

-- Japanese authorities usually refer to both Deming and Juran in any history of quality in Japan.

-- He was awarded the Second Order Medal of the Sacred Treasure, the highest award Japan can bestow on a foreigner, in 1981.

-- He started the Juran Institute, Inc. in 1979, primarily to produce and market his video series, "Juran on Quality Improvement."

-- He transferred active leadership to others in 1987, but remains active.

-- Even though he worked with Shewhart at Western Electric, he considers statistics a useful tool and nothing more.

-- He is noted for the Juran Trilogy (a registered trademark of the Juran Institute) which include quality planning, quality control and quality improvement.

TOTAL QUALITY MANAGEMENT (TQM)

WHO IS TQM ?

WALTER A. SHEWHART:

-- Worked for Western Electric

-- Is credited with starting the quality movement when he gave his manager a memo on May 16, 1924 which included a control chart. The memo suggested a way of using statistics to improve the quality of telephones.

-- Applied his theories at the Hawthorne Works in Chicago, where 5,200 of the 40,000 workers were inspectors.

-- Noted for the Shewhart Cycle of PDSA (plan, do, study, action).

-- Gave four lectures to the Graduate School in the Department of Agriculture in March 1938 at W. Edwards Deming's request. He prepared a year for this series of lectures.

-- There were no books on statistics at the time so the four lectures were published as Statistical Method from the viewpoint of Quality Control in 1939 and reprinted in 1986.

-- His concepts didn't gain acceptance until World War II.

-- Shewhart died in 1967.

WHO IS TQM ?

ARMAND V. FEIGENBAUM:

-- Began his work during World War II as a young engineer at GE helping develop early jet airplane engines.

-- He used statistical techniques to find out quickly why some of the early jet engines blew up.

-- He says, "I realized that here was a body of knowledge that needed to be developed. It was as important as electronics."

-- In 1944, at age 24, he became GE's top quality expert at the headquarters in Schenectady.

-- **The Quality Review** magazine rates him as a major player and credits him with developing the concepts of the cost of quality.

-- He had trouble convincing others within his company of the importance of quality. He began to realize that quality was more than a set of tools, instead a total field. He called this field Total Quality Control.

-- He published his book on total quality control in 1951. It received very little attention in the U.S., but very great attention in Europe and Japan.

-- He began to publish articles in the **Harvard Business Review.**

-- He is not one of the quality teachers and is therefore less know than Deming, Juran or Crosby, yet he is considered one of the top four.

-- He is currently associated with the General Systems Company.

WHO IS TQM ?

PHILIP B. CROSBY:

-- Born in 1926 to a medical family. He got his degree in podiatry, then realized that's not what he wanted to do.

-- He went to work in manufacturing and joined the Crosley Corporation in 1952 as a junior technician.

-- Assigned as a "reliability engineer," he worked his way up through the quality field. He first believed what the quality control professionals told him, but later made up his own rules.

-- He later worked for Martin Marietta and ITT. When he left ITT in 1979, after fourteen years, he was the corporate vice-president for quality, the first one in the U.S.

-- He published his first book, **Quality is Free**, in 1979, which became a best seller and has sold more than two million copies in several languages.

-- He has popularized the saying, "Do it right the first time," which was first used in the mid-'30s at Western Electric.

-- He established Philip Crosby Associates, Inc., which now has "Quality Colleges" in eight foreign countries (including Japan) and six states for teaching his approach to quality.

PHILIP B. CROSBY: (Cont.)

-- His ability to relate to corporate executives and the simpler approach to presenting quality than the other "gurus" has led to it be presented to over 1500 companies starting with IBM.

-- He currently has a staff of about 325 involved with his organization.

TOTAL QUALITY MANAGEMENT (TQM)

WHO IS TQM ?

WILLIAM GLASSER, M.D.:

-- Dr. Glasser is a psychiatrist who has worked with child behavior in the schools since the 1950's.

-- He is noted for his reality theory which states that everyone is responsible for their own actions. He published his first book, **Reality Theory**, in 1965.

-- He later published his book, **Control Theory**, in 1984, which states that everyone has basic needs: survival, love/belonging, power, freedom and fun.

-- He later studied Deming's work and concluded that the reason TQM works is that it allows the individual to meet their basic needs as he described in his **Control Theory.**

-- He published his book, **The Quality School**, in 1990, which ties Deming's work into education. His major points are the elimination of coercion and lead management.

-- He established the Institute for Reality Therapy in Los Angeles which consults in several areas including teaching schools how to become "quality schools."

WHO IS TQM ?

KAORU ISHIKAWA:

-- He came from a very respected family. His father, Ichiro Ishikawa, was president of both the Federation of Economic Organizations and the Union of Japanese Science and Engineering (JUSE).

-- His father arranged Deming's first meetings with Japanese executives in 1950.

-- The family name opened doors and guaranteed respectful attention.

-- He graduated from Tokyo University in 1938.

-- He was a professor of engineering at Tokyo University just after World War II.

-- He went to JUSE to borrow copies of U.S. books on statistics. The head of JUSE would only let him borrow the books if Ishikawa would teach statistical courses in return. Ishikawa argued that he didn't know anything about statistics. Since no one else did either, Ishikawa agreed.

-- He gave in and remained actively involved with JUSE until his death in 1989.

-- He urged statistical methods of quality control at JUSE in 1949.

-- He won the Deming Prize in 1952.

KAORU ISHIKAWA:

-- Ishikawa is recognized as the first advocate of Total Quality Control (TQC). He published a book titled, **What is Total Quality Control**, which was translated into English in 1985.

-- He is credited with placing primary importance on the role of the customer, both internal and external to the organization.

-- He developed the "cause and effect diagram" (fishbone diagram).

-- He also developed quality control circles in 1962.

-- He insisted that quality control was not only the job of QC specialists, but that all employees become involved in studying and promoting QC.

-- His English translator, David J, Lu, wrote, "His life and the history of QC (quality control)in Japan are inseparable."

WHO IS TQM ?

GENICHI TAGUCHI:

-- He does not have a college degree.

-- He won the Deming Prize in 1960.

-- His work is highly theoretical.

-- He maintains that quality is primarily a function of design.

-- He is noted for the Taguchi Loss Function which recognizes that there is an incremental economic loss for any deviation.

-- He is also noted for the "Taguchi Methods", an engineering approach to quality which calls for off-line quality control, on line quality control and a system of experimental design to improve quality and reduce costs.

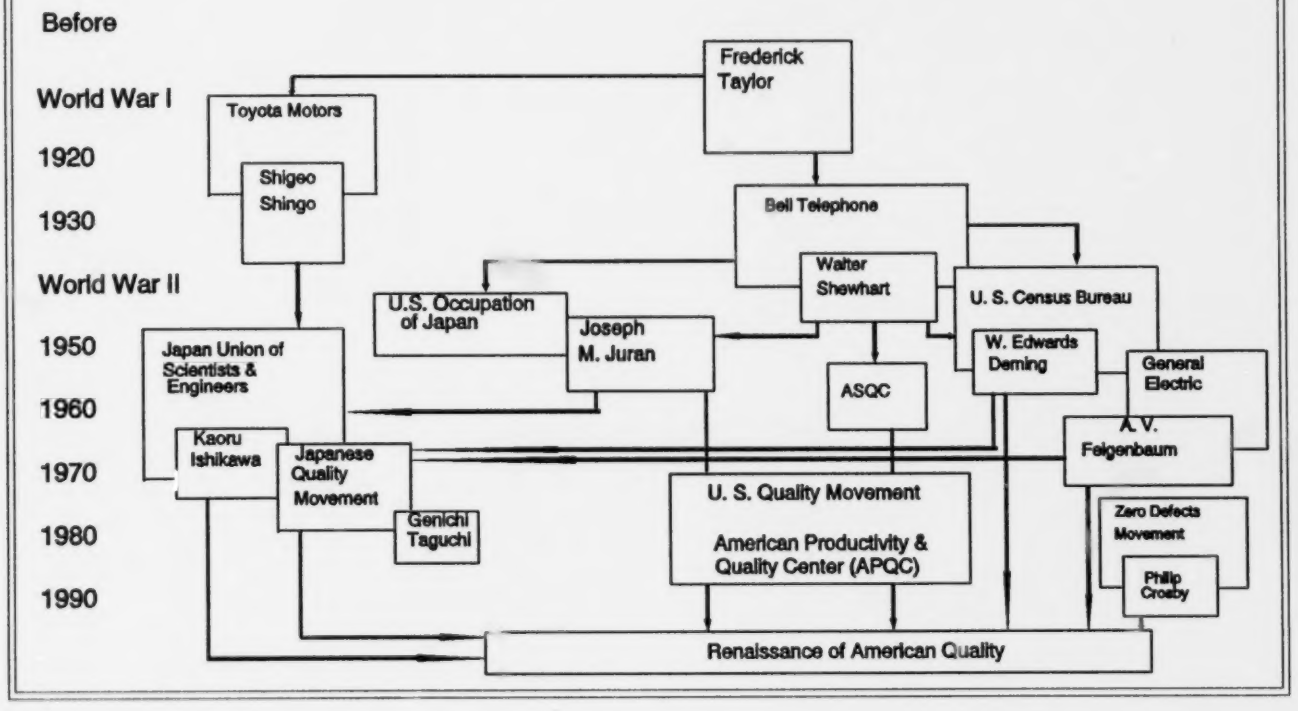
RECOGNIZED U.S QUALITY "GURUS"

- **W. EDWARDS DEMING** (Born in 1900)
- **JOSEPH M. JURAN** (Born in 1904)
- **ARMAND V. FEIGENBAUM** (Born in 1920)
- **PHILIP B. CROSBY** (Born in 1926)

- ALL FOUR ARE STILL ACTIVE IN THE QUALITY MOVEMENT.

--- Lloyd Dobyns and Clare Crawford-Mason, **Quality or Else**

Quality's Family Tree



– "Investment for Survival", Texas Department of Commerce
Quality Texas Presentation

DEMING'S FOURTEEN POINTS *

1. Create constancy of purpose for improvement of product and service.

2. Adopt the new philosophy. (mistakes and negativism are unacceptable)

3. Cease dependence on inspection to improve quality.

4. End the practice of awarding business on the price tag alone. Instead minimize total cost.

5. Improve constantly and forever the system of production and service.

6. Institute training.

7. Institute leadership.

8. Drive out fear, so that everyone may work more effectively for the company.

9. Break down barriers between departments.

10. Eliminate slogans, exhortations and targets for the work force.

11. Eliminate numerical quotas. Substitute leadership.

12. Remove barriers that rob the workers of their right to the pride of workmanship.

13. Institute a vigorous program of education, retraining and self-improvement.

14. Put everybody in the company to work to accomplish the transformation. The transformation is everybody's job.

* **Deming Management at Work** by Mary Walton

THE THREE KEY INGREDIENTS OF DEMING'S FOURTEEN POINTS

-- CONTINUAL IMPROVEMENT

-- CONSTANCY OF PURPOSE

-- PROFOUND KNOWLEDGE

- -- APPRECIATION FOR A SYSTEM
- -- THEORY OF VARIATION
- -- THEORY OF KNOWLEDGE
- -- PSYCHOLOGY

DEMING'S SEVEN DEADLY DISEASES *

1. Lack of constancy of purpose to plan product and service that will keep the company in business and provide jobs.

2. Emphasis on short-term profits: short-term thinking.

3. Evaluation by performance, merit rating or annual review of performance.

4. Mobility of management: job hopping.

5. Running a company on visible figures alone, with no consideration of figures that are unknown or unknowable.

6. Excessive medical costs for employee health care, which increase the final costs of goods and services.

7. Excessive costs of warranty, fueled by lawyers who work on the basis of contingency fees.

* Deming Management at Work by Mary Walton

DEMING'S OBSTACLES *

1. "Hope for instant pudding," the idea that improvement of quality and productivity is accomplished suddenly by an affirmation of faith.

2. The supposition that solving problems, automation, gadgets and new machinery will transform industry.

3. "Search for examples," which companies undertake to find a ready-made recipe they can follow when they must instead map their own route to quality.

4. "Our problems are different," the pretext managers raise to avoid dealing with quality issues.

5. "Our quality control department takes care of all our problems of quality," another excuse managers use to avoid taking reponsibility.

6. "We installed quality control," yet another excuse that lets top management off the hook.

7. "The supposition that it is only necessary to meet specifications." Not only may product specifications yet vary widely in quality, but in addition, "the supposition that everything is all right inside the specifications and all wrong outside does not correspond to this world."

* Deming Management at Work by Mary Walton

JURAN'S 10 STEPS TO QUALITY IMPROVEMENT *

1. Build awareness of the need and opportunity for improvement.
2. Set goals for improvement.
3. Organize to teach the goals (establish a quality council, identify problems, select projects, appoint teams, designate facilitators).
4. Provide training.
5. Carry out projects to solve problems.
6. Report progress.
7. Give recognition.
8. Communicate results.
9. Keep score.
10. Maintain momentum by making annual improvement part of the regular systems and processes of the company.

* Total Quality Management Video Workbook by Verne Harnish, Careertrack

JURAN'S THREE MOST IMPORTANT ITEMS

IN A QUALITY PROGRAM

-- THE TOP PEOPLE MUST BE IN CHARGE

-- THE PEOPLE MUST BE TRAINED IN HOW TO MANAGE FOR QUALITY

-- QUALITY MUST BE IMPROVED AT AN UNPRECEDENTED, REVOLUTIONARY PACE

CROSBY'S FOURTEEN POINTS *

1. Management Commitment -- To make it clear where management stands on quality

2. Quality Improvement Team -- To run the quality improvement process.

3. Measurement -- To provide a display of durrent and potential non-conformance problems in a manner that permits objective evaluation and corrective action.

4. Cost of Quality -- To define the ingredients of the Cost of Quality (COQ) and explains its use as a management tool.

5. Quality Awareness -- To provide a method for raising the personal concern felt by all employees toward the performance of the product or service and the quality reputation of the company.

6. Corrective Action -- To provide a systematic method of resolving forever the problems that are identified through the previous action steps.

7. Zero Defects Planning -- To examine the various activities that must be conducted in preparation for formally launching Zero Defect Day.

8. Employee Education -- To define the type of training all employees need in order to actively carry out their role in the Quality Improvement Process.

9. Zero Defects Day -- To create an event that will let all employees realize, through a personal experience, that there has been a change.

CROSBY'S FOURTEEN POINTS *

10. Goal Setting -- To turn pledges and commitments into action by encouraging individuals to establish improvement goals themselves and their groups.

11. Error Cause Removal -- To give the individual employee a method of communicating to management the situations that make it difficult for the employee to meet the pledge to improve.

12. Recognition -- To appreciate those who participate.

13. Quality Councils -- To bring together the appropriate people to share quality management information on a regular basis.

14. Do It All Over Again -- To emphasize that the Quality Improvement Process is continuous.

* Quality or Else by Lloyd Dobyns and Clare Crawford-Mason

CROSBY'S FOUR ABSOLUTES

OF QUALITY MANAGEMENT

1. THE DEFINITION OF QUALITY IS CONFORMANCE TO REQUIREMENTS.

2. THE SYSTEM OF CAUSING QUALITY IS PREVENTION.

3. THE PERFORMANCE STANDARD FOR QUALITY IS "ZERO DEFECTS."

4. THE MEASUREMENT OF QUALITY IS "THE PRICE OF NONCONFORMANCE."

CORE OF QUALITY PRINCIPALS ACCEPTED BY ALL QUALITY TEACHERS TO SOME DEGREE

-- THE WORKER IS NOT THE PROBLEM, MANAGEMENT IS

-- TO SOLVE THE PROBLEM TAKES A CORPORATE COMMITMENT FROM THE TOP DOWN

-- WHAT YOU DO HAS TO BE SYSTEMATIC, SPECIFIC, AND CONTINUAL

-- YOU MUST STUDY THE SYSTEM TO SEE WHAT NEEDS TO BE DONE

-- YOU MUST INCLUDE YOUR SUPPLIERS AND YOUR CUSTOMERS

-- EMPLOYEES MUST BE EDUCATED AND TRAINED

-- QUALITY MUST BE PART OF THE SYSTEM, NOT AN INSPECTION

-- Lloyd Dobyns and Clare Crawford-Mason, **Quality or Else**

" PARADIGMS AND THE NEED FOR CHANGE "

Prepared by

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June 1, 1993

C:DIGMMSTR.CVR

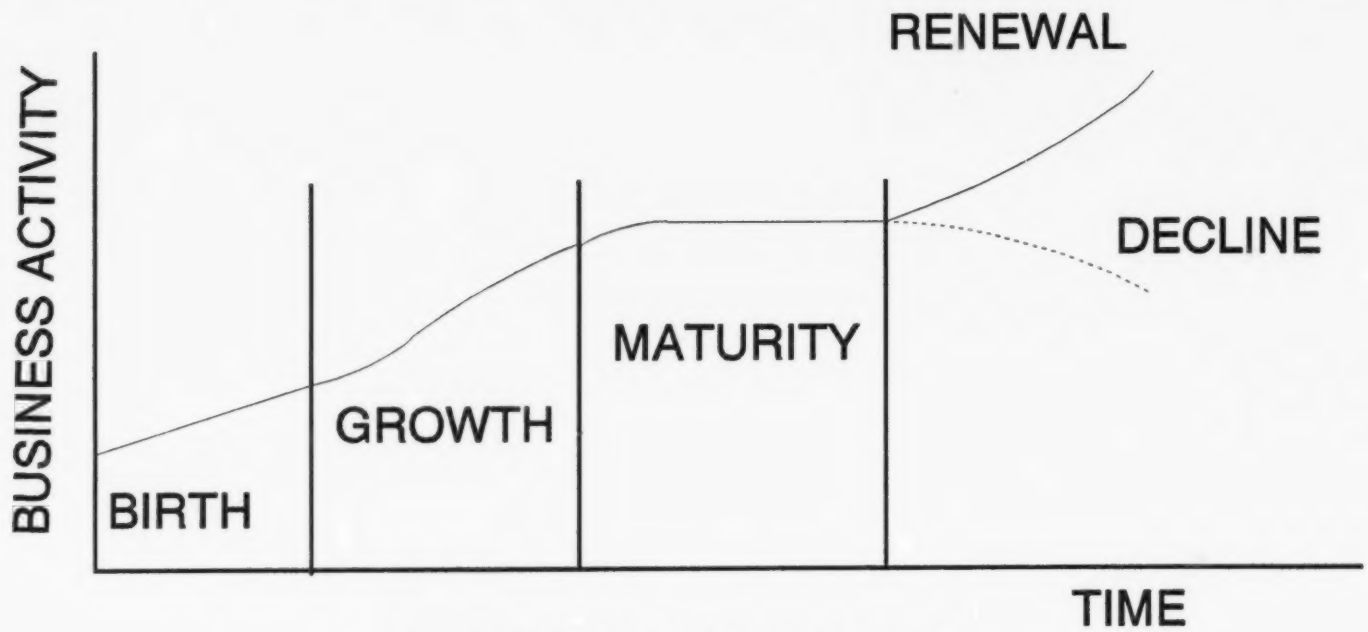
" THERE IS NOTHING WRONG WITH CHANGE IF IT IS IN THE RIGHT DIRECTION. TO IMPROVE IS TO CHANGE, SO TO BE PERFECT IS TO HAVE CHANGED OFTEN. "

-- Sir Winston Churchill

" THE ONLY PERSON WHO LIKES CHANGE IS A WET BABY "

-- Roy Blitzer

ORGANIZATION LIFE CYCLE



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DEMONSTRATING MATURITY

- RESISTANCE TO CHANGE
- LOW MORALE
- CONFLICT
- PERSONNEL TURNOVER
- CENTRALIZATION OF CONTROL
- LACK OF LONG-TERM PLANNING

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CHANGE

KILLER STATEMENTS

-- Let's form a committee

-- That won't work in our company

-- We don't have the time/money

-- We need to be careful with this

-- Management will never buy it

-- That's too radical

-- Let's be practical

-- It's against our policy

-- Let's check with legal on that

-- We tried it that way 10 years ago

-- We've been doing it this way for years, why change

-- The universal killer idea: SILENCE

-- John Gray Institute

" CHANGE IS A GIVEN -- ENJOYING IT

IS A CHOICE "

– Anonymous

CHANGE

IGNITOR STATEMENTS

-- I appreciate what you've done

-- I never thought of that

-- We can do a lot with that idea

-- How can we get this started?

-- I value your judgement

-- We can always count on you for a new idea

-- That's a great idea!

-- Let's get right on it

-- I have faith in you

-- Go ahead.....try it.....

-- Keep up the good work

-- The universal idea ignitor: Smile/Encouraging word

-- John Gray Institute

" THERE IS NOTHING PERMANENT

EXCEPT CHANGE. "

-- Heraclitus, 500 BC

PARADIGMS

DEFINITIONS:

-- Paradigms are accepted examples of actual scientific practice.

-- Thomas S. Kuhn

-- A shared set of assumtions. The paradigm is the way we perceive the world; water to the fish.

-- Adam Smith

-- The basic way of perceiving, thinking, valuing and doing associated with a particular vision of reality.

-- Willis Harmon

-- A paradigm is a set of rules and regulations that: 1) defines boundaries; and 2) tells you what to do to be successful within those boundaries. (Success is measured by the problems you solve using these rules and regulations.)

-- Joel Barker

PARADIGMS

KEY OBSERVATIONS ABOUT PARADIGMS:

-- Paradigms are common.

-- Paradigms are useful.

-- Sometimes your paradigm is the only one -- you reject other ideas.

-- People who create new paradigms are often outsiders.

-- Practitioners of an old paradigm who change to the new paradigm must be courageous and have faith.

-- You can choose to change the rules.

-- From the tape: "The Business of Paradigms" by Joel Barker

EXAMPLES OF CHANGING PARADIGMS

- HIGH JUMP
  - SCISSORS
  - ROLL
  - FOSBURY FLOP
- SWISS WATCH
- NATIONAL WEALTH
  - NATIONAL RESOURCES (TIMBER, LAND, IRON, OIL)
  - HUMAN RESOURCES (SWITZERLAND, SINGAPORE)
- PRODUCTION
  - QUANTITY
  - QUALITY

" EVEN IF YOU ARE ON THE RIGHT TRACK,

YOU'LL GET RUN OVER IF YOU JUST SIT THERE."

-- Will Rogers

SHIFT IN MANAGEMENT PARADIGMS

CONVENTIONAL MANAGEMENT THINKING	TOTAL QUALITY MANAGEMENT THINKING
1. Quality improvement costs money and time.	1. Quality improvement saves money and time.
2. Work is a series of events.	2. Work is an integrated process.
3. Quantity is as important as quality.	3. Without quality, quantity is irrelevant.
4. Quality means hitting preset goals.	4. Quality means continuous improvement.
5. 95% is great.	5. Only 100% will do.
6. Quality is the result of better inspection.	6. Quality is built-in from the start.
7. Suppliers must be kept on their toes.	7. Suppliers must feel like they are your partners.
8. Customers are who you sell to.	8. Customers are an integral part of your organization.
9. To achieve quality, we need more and better people.	9. Quality can be achieved with the people you have right now- - - simply by leading and training them differently.

-- Verne Harnish, "Total Quality Management Workbook"

C:SHIFT

Changing Education Paradigms

All students should be at the same grade and age level	"Normal" student learning can vary as much as 2.5 years ahead or 2.5 years behind age level
All students learn in the same way at the same time	Students have different learning styles and learn at different rates
Remediation and Rework Education	Understanding variability
Grading, rating, ranking	Learning
Carnegie Units - seat time	Documented learning
Isolated subject areas	Integrated learning
Content Knowledge	Process Learning
Just get it done	Quality Work
Extrinsic Motivation	Intrinsic Motivation
Classroom Control	Self Managed Classrooms
Teacher as knowledge giver	Teacher as knowledge facilitator
Students, Teachers, Administrators	Colleagues
Workbook, Textbook Syndrome	Interactive Learning
Curriculum Mastery	JIT - Just In time Learning
Lecture	Project Learning
Negotiated Agreements	Participative Management

-- David Langford, Langford Quality Education

HOW TO AFFECT CHANGE

HOW DO WE "GET OUT OF THIS BOX?"

- STAND WHERE YOU WANT TO BE AND LOOK BACK AT WHERE WE ARE.

- BELL LABORATORIES CALLS IT "IDEALIZED REDESIGN."

-- Dr. Russell L. Ackoff, Governor's Conference on Quality in Education, November 9, 1992

" THE FUTURE 'AIN'T' WHAT IT USED TO BE. "

-- Yogi Berra

TQM OVERVIEW

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